



# HOLMDEL TOWNSHIP SCHOOL DISTRICT

*"A COMMITMENT TO EXCELLENCE"*

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## **FOR IMMEDIATE RELEASE**

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### **STEM CONTINUES TO GROW AND BLOSSOM WITH HHS ROBOTICS TEAM**

HOLMDEL (May 21, 2017) – Holmdel High School’s robotics team’s intelligence is far from artificial as they continue to succeed in competitions and make the school extremely proud of their efforts in promoting the opportunities, and fun, in pursuing STEM.

Holmdel’s Robotics Team, cleverly named “Holmdel’s Team Robotux” (with a very distinguished penguin as their mascot) officially competes as a First Tech Challenge, or FTC team. The FTC team is designed for a small group of students who often get more hands-on experience with many aspects of the planning, design, and construction of devices.

The origin of Team Robotux dates back to around 2010, when Holmdel student Jesse Stevenson and a few friends began tinkering with robotics in his basement. As other friends and classmates expressed interest in the club, it officially became a neighborhood FTC team, and eventually a formal school club three years ago. Stevenson, now a sophomore at Stevens Institute of Technology, still maintains a connection to the team as his father, Robert Stevenson, is currently a mentor to the students and helps to train and recruit those new to robotics, continuing to truly make it both a school and community effort.

The current team is made up of eight students. Jessica Kuleshov (co-president) works with building, CAD, general affairs, and coaching; Aditya Dharap (co-president) handles building, programming, and the main driver for the unit; Gabby DeGregorio (secretary) oversees the documenting/engineering notebook, and outreach; Ayan Gupta (webmaster) deals with CAD and programming; Christine Kim does t-shirt and merchandise design, team mascot, and scouting; Kevin Franchi helps with building, documenting, and leads the drive team; Ben Ling also helps with building and scouting; and Myles Cork assists in building and programming. The students represent a wide-range of expertise and varied grade levels, but function as a team, which is a vital component of FTC, which can be a very rigorous competition, requiring extensive technical knowledge as well as team cooperation.

Current co-president and long-time member Jessica Kuleshov initially got interested in the team when her older brother competed. Kuleshov admits that what she enjoys most about the team is that “there is a lot of hands-on work and self-teaching that goes on, and learning first-hand and outside of a classroom, in my opinion, is the key to grasping more challenging concepts required in engineering.” As a junior, Kuleshov is interested in eventually pursuing mechanical and aerospace engineering in college, and she feels that helping to build the robot directly ties into that. “I have learned how to use many power tools and have had much experience with the IT thinking process as well through this experience,” Kuleshov says. She emphasized she has

“learned how to cooperate on large projects and how to mediate the occasional dispute in order for everyone to work together efficiently.” This is where the team is truly a model for cooperative learning and development.

And the cooperative and community aspects do not stop there. Once every marking period, team members visit William R. Satz Middle School to work for a day with Mrs. Christen McCafferty's Technical Education classes on a hands-on project meant to introduce basic concepts of engineering and STEM. This is where they try to recruit new members and hopefully ignite the spark of interest with younger students who are unsure of how the team operates. The high school team also participates in the local Holmdel Barnes & Nobles' STEM Night, which is the last Wednesday of every month. Thus far, they have used their visits to demonstrate how their robot functions and what it can do, as well as help out with the robots that Barnes & Noble supplies and help to guide and encourage young visitors in their exploration of these new devices.

To illustrate how the team is able to generate awareness in the STEM-based competition, you need look no further than Holmdel junior Gabby DeGregorio. DeGregorio admits she never had any real interest in STEM until she was recruited by some very convincing upperclassmen at the school's club fair in her sophomore year. Since then, she has learned a great deal from her fellow team members and from the team mentor, Robert Stevenson, and it is not just the technological aspects DeGregorio appreciates. She explains that she is “particularly interested in the business, organization, and management portion of the team. Every team is required to document their progress throughout the season in an Engineering Notebook, so for the past two years I've been most interested in helping write that”. DeGregorio went on to say that the program encourages students to work hard and cooperate with others to put forward their best work, along with putting an emphasis on connecting with our communities and spreading the word about STEM. She notes, “I never would have had any strong interest in engineering or business without having been a part of this team. This team inspired me to become the best version of myself and to continue to strive on even when faced with failure”.

Failure seems to be a design flaw that this team has discovered a work-around for, especially in light of their performance in this past year's competitions. After excelling at the FTC New Jersey Garden State Rumble Championship on February 26<sup>th</sup> in West Windsor-Plainsboro, the team moved on for the first time to the FTC East Super Regionals at the University of Scranton from March 17-19. Winners from the Super Regionals move on to the World's competition which includes teams from around the world.

Though they did not qualify for the World competition, the team remains steadfast (or is that STEM-fast?). Co-president Jessica Kuleshov summed it up quite well. She said that “Overall, the competition was a wonderful experience. Though we did not qualify for the Worlds competition, we did get to see the toughest in the region and had a chance to network with more teams. By looking at the robots and clubs who came, we gained more of an understanding on how much more we can do with part fabrication and community outreach. We hope to get this far next year as well, if not further, and teach and connect with our community on an even larger scale. The competition was tough, and we did the best we could, and we shall continue teaching and spreading STEM to those around us.” And when it comes down to it, trophy or not, Holmdel could not be prouder of what teams like this teach us about the true rewards of cooperative education and the future of innovation in the district, and the world.