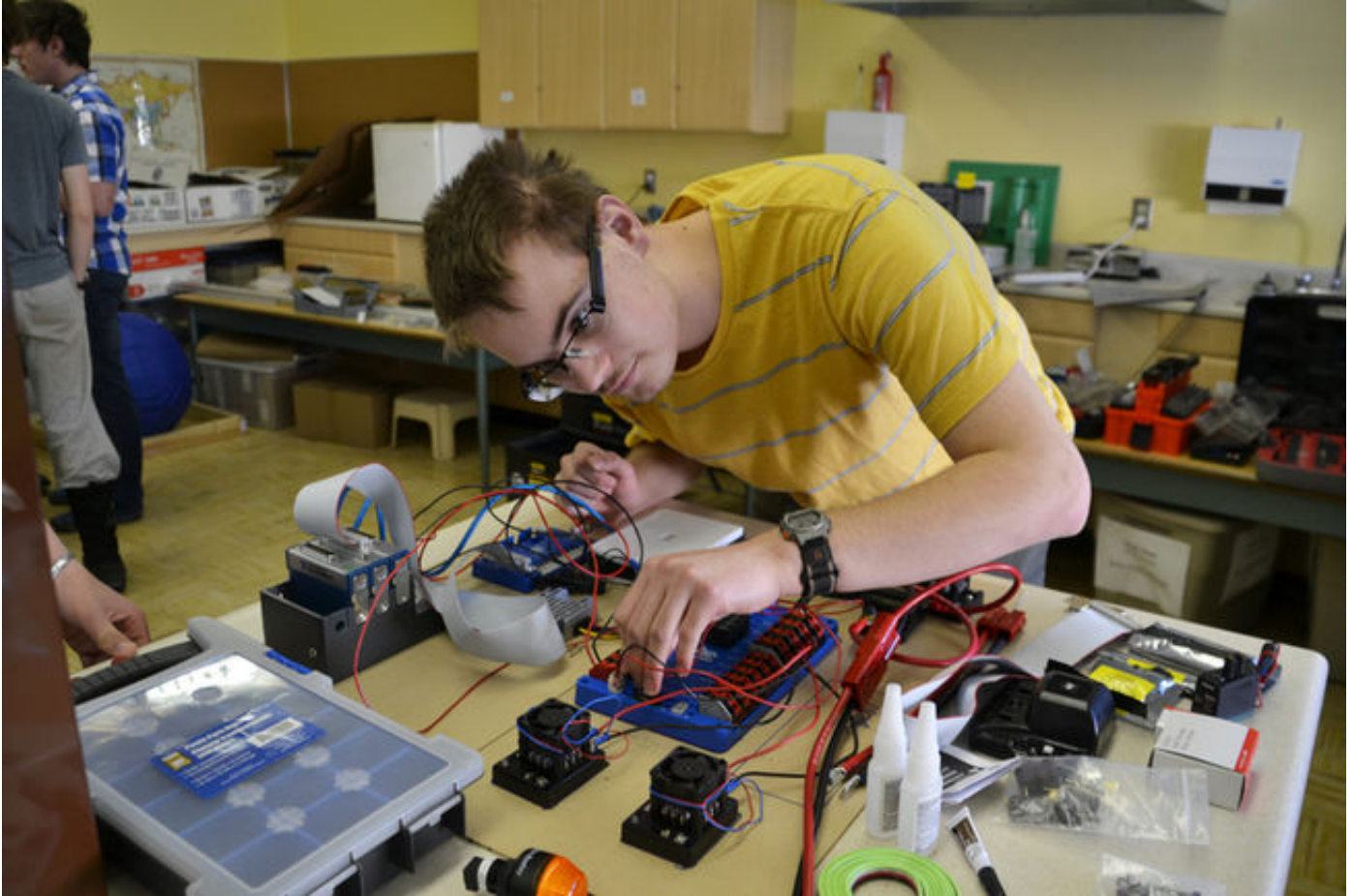


In its first FRC challenge, Edmonton team OpCom Robotics faces challenges

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Team member of Opcom Robotics and student Matthew Vandermeer, 16, works on circuitry for the team's entry at the FIRST Robotics Competition in a classroom at the Progressive Academy. DOUG JOHNSON Edmonton Examiner

New to the game, OpCom Robotics has a few bugs to work out. The team, composed of nine students and a number of supporting staff and mentors, hope to enter their creation to compete for the first time in the First Robotics Challenge (FRC) regional competition in Calgary on April 4 and 5 against other high school student groups, aged 14 – 18 from across North America.

OpCom Robotics went to Calgary in early January for the kick-off event, held by For Inspiration and Recognition of Science and Technology (FIRST), to up their \$7,000 kit, full of gears, circuits, wheels and other equipment. The team is also allowed to purchase other parts for their team, and the team's FIRST coordinator Dr. Mario Pineda estimates the end price tag to read something closer to \$10,000.

After that, they have six weeks, until Feb. 18, to make a full functional robot, capable of playing a game similar to basketball called Aerial Assist. There are various prize categories, but the team whose machine performs best gets to go to the FRC finals.

It was after the team purchased its kit that the team members hit their most dramatic snag. Pieces that come standard were missing, making it impossible for the team to build their electrical circuits, for example. Now three weeks into the build time, the rookie team is waiting for replacement parts that they ordered from the united states.

However, when OpCom contacted the organizers, another team in Calgary sent them the parts they needed.

FIRST has a set of core values, one of which is “gracious professionalism,” Pineda explained. These are set in-place to foster a learning environment, rather than a wholly competitive one.

“Although these two teams are potentially competitors, they are actually helping each other,” Pineda said.

Through building a robot, the teams learn mechanical skills, building things using metal, rivets and power tools and gain an understanding of electrical work and programming. A few discrete learning opportunities pop up as well, like team work, fund raising and logo design, which the students all do themselves under the guidance of their coordinator and mentors.

They also earn high school credits for their effort.

“There's lots of opportunities to learn a diverse set of skills for the students that are going to be useful later on in life, like in University,” said Pineda.

“The process by which they make the robot is probably very similar to what engineers actually do.”

There is no upper limit to the number of students per team and, on top of being new to FRC, OpCom is relatively small, sporting nine members, while more established teams can have around 50.

Pineda has coordinated other FIRST teams, though for younger teams who mostly worked with Lego. This is the first time he will be working with high school students in this capacity, though he hopes to teach those grades in the future.

This is the first year that Edmonton has any teams competing, and two other FRC groups popped up at the same time as OpCom: one at Harry Ainlay and one at Mother Margaret Mary Catholic High School.

While these teams have home bases on their respective campuses, OpCom is a community-based group, drawing talent from schools across Edmonton into its workspace at the Progressive Academy. The logistics of this carries its own problems, and, while it's a lot of work for the students (only one of which goes attends the school), they work there every day.

The group reached out to the community through Make Something Edmonton to try to raise funds, professional support (they're lacking an electrical engineer, Pineda said) and interest.

“It's our first year, but we're already planning for next year,” Pineda said.

For more information, visit facebook.com/opcomrobotics

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