

Mechatronics



Mechatronics Technology Professor Ken Luchini (center) instructs students from iUrban Teen on mechatronics machinery.

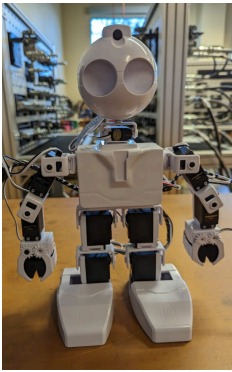
Ten local middle- and high-school students visited the mechatronics technology labs at Clark College Columbia Tech Center on April 1 during spring break.

The students came to campus as an exploratory field trip with the nonprofit iUrban Teen, a STEM (Science, Technology, Engineering, and Mathematics) plus arts education program that brings together underrepresented teens and young adults of color for career exploration and mentoring. Learn more about iUrban Teen [here](#).

Mechatronics Technology Professor Tina Jenkins worked with iUrban Teen to bring the group to campus during Clark's spring break, which coincided with the spring break of local school districts. It proved to be an ideal time for the group to visit the labs to learn about Mechatronics Technology.

Learning about Mechatronics

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Before they entered the lab, each student slipped on a pair of polycarbonate safety glasses. These students would not simply be observing. They were going to actively learn about mechatronics and participate in hands-on activities.

The iUrban Teen students were divided into two groups. The first group gathered in the electrical and power distribution systems lab around Ken Luchini, who leads the mechatronics program.

Sporting a long blue lab coat, he stood at a whiteboard and gave an overview of mechatronics and an industrial motor control circuit the students were going to use. Then he stood

at an industrial controls training system cart, a training device that provides

students with a flexible system allowing for hands-on experiments in wiring and troubleshooting of control circuits.

First, Professor Luchini demonstrated the motor starter with jog/stop circuit. Then students took turns operating the industrial motor controls.



Across the hall in the fluid power lab, Mechatronics Professor Tina Jenkins (*above*) instructed the second group of students about how to use pneumatics. Specifically, she supervised students practicing extending and retracting a simple cylinder circuit. She also introduced students to the flexible manufacturing system where students learn to operate and troubleshoot a manufacturing process.

Standing nearby, Monte Gantka, a mechatronics classroom

support technician, instructed students how to use vacuum technology that uses compressed air to pick up nuts, bolts, and other small objects.

In both labs, students were engaged and focused as they learned about mechatronics technology. Before they set foot in the mechatronics lab, it is likely that none of the students had ever heard of mechatronics. By the time they left the labs, all of them had been given the opportunity to grasp a basic understanding of the industry and its potential career pathway.

Professor Jenkins said, "We were excited to have the opportunity to work with iUrban Teen to introduce local middle and high school students to Clark's mechatronics technology program. Who knows how we might have impacted students' career paths today? I am hoping we see some of these students in our mechatronics program in the coming years."

Ken Luchini is retiring on June 30, after 10 years as a Clark College mechatronics professor. Tina Jenkins will become the new program chair in the 2024-25 academic year.

Simone Thomas, iUrban Teen's program manager, accompanied the students on the field trip and learned about Mechatronics as she stood beside the students. She thanked Professor Jenkins in an email: "The students enjoyed their time in mechatronics. We would love to continue this partnership and come back with more students next year."



Journalists representing two news media outlets, *The Columbian* newspaper and KPTV Fox 12, also attended the lab visit and interviewed Clark mechatronics faculty, staff, and iUrban Teen students. They filed these stories:

- The Columbian: Elevating STEM education (columbian.com)
- KPTV Fox 12: Teens explore the word of mechatronics (kptv.com)

About Mechatronics Technology:

- A two-year program for mechatronics technicians
- Associate in Applied Technology degree in Mechanical and Instrumentation Automation
- Career fields: mechatronic technicians work in semiconductor manufacturing, transportation, plastics production, computer manufacturing, aerospace, and more.
- Learn more: Mechatronics (clark.edu)

Photos: Clark College/Susan Parrish