

ACADEMIC EXCELLENCE



# DOUBLE

## THE CHALLENGE

Senior first in state to complete two C4 pathways

By **MATTHEW KENT** | THE REPUBLIC  
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**A** Columbus North High School senior who is preparing for medical school is believed to be the only high school student in the state ever to complete scientific pathways for biomedical science and engineering at the same time.

North student Hussain Saifuddin has been enrolled in the two pathways offered through the C4 program since his freshman year.

He received an award of excellence from the Indiana Department of Education earlier this month for completing the pathways, said Gene Hack, C4 director. Both pathways are considered to be academically rigorous, he said.

"Hussain's a great example of a student that takes control of their pathways," Hack said. "He's a great all-around person."

Pairing the programs and completing them

**INSIDE:** Learn more about the C4 program & pathways. **Page A8**

at the same time was something that Saifuddin considered during his first year of high school.

"Freshman year, I didn't know what I wanted to do," Saifuddin said. "I already knew I liked math and science, so I knew I wanted to gravitate towards that."

There have been some sacrifices made along the way, however, he said.

Saifuddin gave up an opportunity to have a resource period during his first three years of high school. The free periods are meant to give students an opportunity to do their homework during school, but instead he opted to take classes during those resource hours.

Not having that extra time to do homework in school provided more motivation to complete the work, he said.

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### Get to know Hussain Saifuddin

**AGE:** 17

**PARENTS:** Saifuddin and Humema Zainuddin

**SIBLINGS:** Murtaza Saifuddin and Huzefa Saifuddin

**COLLEGE:** Planning to attend either Purdue University or Indiana State University

**MAJOR:** Biomedical engineering



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**North senior Hussain Saifuddin**

On deciding to complete two C4 pathways

**Pictured:** Columbus North senior Hussain Saifuddin talks about nearing completion of both the biomedical and engineering C4 career pathways during an interview Thursday at Columbus North High School. He will be the first student in the C4 program to complete two different career pathways at the school. **MIKE WOLANIN** | THE REPUBLIC

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### A future career

Saifuddin plans to study biomedical engineering at either Purdue University or Indiana State University this fall.

To prepare for that, he was accepted as an intern last summer at Faurecia in Columbus, where he worked on the plant's manufacturing floor learning about a can crusher and needed safety protocols for operating the equipment, he said.

As part of the engineering component, the internship taught him about circuits when he replaced a controller board for the machine, he said.

Working at Faurecia provided a glimpse into a career he could have, Saifuddin said.

In addition to the engineering skills, Saifuddin's work in the lab helped him earn a Microsoft certification tied to Office programs including Excel.

"I thought being exposed to that will help me down the road," Saifuddin said.

Saifuddin's younger brother, Murtaza, is considering following in his footsteps. Murtaza Saifuddin is a freshman at Columbus North and is taking introductory classes in biomedical science and engineering pathways.

C4 has 2,700 students within BCSC who are enrolled in different programs, while 350 to 370 students from outside the district are also enrolled. C4 offers opportunities for students to explore different career areas, Hack said.

Several programs have a built-in internship component, while other students work with different community partners in career-specific fields, Hack said. Advisory committees made of individuals representing different sectors within the community offer input on curriculum and the equipment purchases for the program, he said.

Saifuddin also is keeping busy working to complete his capstone project for both pathways. The final project is a requirement for fourth-year students who are in the Project Lead the Way classes in the areas of biomedical science or engineering, Hack said.

His capstone project, which focuses on disabled driving, is a

combination of biomedical science and engineering pathways, Saifuddin said.

"Specifically, I plan to create a rotating platform that could be inserted underneath the driver's seat and then could be extended to allow disabled drivers to place their feet on for those who have no movement in their legs," Saifuddin said.

Saifuddin said his capstone project not only involves engineering a product, but also researching different diseases that would cause an individual to be paralyzed from the legs down or conditions that cause someone to have no control of their legs.

"I am currently in the prototyping stage of the process and am creating sketches and modeling the product as well as doing materials research to see what is the most efficient and cost effective material I could use to make the product," he said.

Saifuddin also gained experience in the biomedical science field by volunteering at Columbus Regional Hospital during his freshman and sophomore years.

As part of his duties, he met with patients and then put their information into a hospital database.

Saifuddin also is a member of the HOSA-Future Health Professionals organization, formerly known as Health Occupations Students of America, and was on a local robotics team during his sophomore and junior years.

### Developing skills

The skills that students including Saifuddin are gaining through the C4 pathways such as engineering will prepare them for college, said Samantha Olmstead, a C4 engineering teacher. Olmstead graduated from North and went on to earn her bachelor's degree in aeronautical engineering from Purdue University.

Olmstead said she now uses the skills she learned in the C4 engineering pathway to prepare current students to think like an engineer.

"I learned a lot (about) how to be a good student, how to be a good employee," Olmstead said of her own C4 experience. "We're trying to build employability skills. Being able to be a valuable team member is a vital thing."

Olmstead also encourages other students to look into the various programs that C4 has to offer.

"I feel like I get to bring a unique perspective because I was a student and now I'm a teacher," she said. "C4 is a great way to explore multiple career fields before you go to college and start preparing for it."



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### Samantha Olmstead

C4 engineering teacher on the C4 program and its benefits to students

### About the C4 Program

The Columbus Area Career Connection, commonly known as C4, offers career and technical education to students in Bartholomew, Brown, Decatur, Jackson and portions of Johnson County. Facilities for C4 classes are located at Columbus East and Columbus North high schools, in addition to the McDowell Adult Education Center.

C4 also offers two Project Lead the Way pathways, biomedical science and engineering, to students.

**Project Lead the Way engineering information:** [www.pltw.org/our-programs/pltw-engineering](http://www.pltw.org/our-programs/pltw-engineering)

**Project Lead the Way biomedical science information:** [www.pltw.org/our-programs/pltw-biomedical-science](http://www.pltw.org/our-programs/pltw-biomedical-science)

**C4 offers 10 career clusters and different areas of study include:**

- Agricultural science and business
- Business management and finance
- Communications
- Computer technology
- Construction engineering technology
- Engineering manufacturing technology
- Health sciences
- Human services
- Criminal justice
- Transportation

**MORE INFORMATION:** Call 812-376-4240 or visit [bcsc.k12.in.us/Page/7505](http://bcsc.k12.in.us/Page/7505)

**Source: Columbus Area Career Connection website**