

# MAKING THE Connection TO Career Technical Education



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## PART 1

# Trailblazing Women of Chippewa Valley Schools Career and Technical Education

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The best way to understand the value of career and technical education (CTE) is to listen to our alumni. The perspective that time and reflection bring is often profound, and their experiences can provide an illuminating example for younger students to follow. This year's, 2-part, "Making the Connection" will introduce you to two trailblazing women who took advantage of the opportunities offered by CTE when they were students attending Chippewa Valley Schools.

Alexa Bartold graduated from Chippewa Valley High School in 2017 and completed our multi-year CTE Design Technology program with Mr. Jason Youngblood. Today, Alexa is a Senior at Kettering University studying Mechanical Engineering. As she describes it, "Before taking any CTE classes in high school, I had no clue what career path I wanted to pursue." Alexa enjoyed being creative, so she enrolled in Design Technology, initially thinking that the architecture pathway might be her destiny. She reflects, "I had no idea what engineering was, but through that first CTE class, I learned about it, and soon discovered that was what I wanted to do."

Academics and CTE; it all fits together. Alexa says, "CTE helped me find real world applications to my core studies like math and physics. It helped me excel in my core classes." Alexa also took AP and Honors courses along with CTE which helped her "learn how to study better and develop important time management skills."

CTE is valuable! Alexa says, "The material I learned in my CTE classes still holds value to me four years later. The applicability to real world situations and career-specific material has helped me far more than anything I studied for the standardized tests like ACT/SAT. Mr. Youngblood ensured that I was continuously challenged." When Alexa expressed her strong interest in robotics, Mr. Youngblood allowed her to borrow a new VEX robot for the summer. "I was able to build the VEX robot, learn to program it in Robot C, and tinker while I learned how to maneuver it in different configurations. This experience gave me confidence to share my knowledge with my peers. The following fall, I helped to establish the VEX Robotics Club at CVHS. Teachers too were just learning about VEX Robotics, so I was invited to explain my knowledge about working with a VEX robot with the Design Technology teachers from both high schools who appreciated my understanding of the robot. I also enjoyed sharing my knowledge with students and parents at the CVHS Curriculum Night."

Alexa describes how CTE skills are both pivotal and enduring: "One of the most important skills I learned in high school, and still use today, is 3D modeling. I was given the opportunity to learn AutoCAD, Inventor, and SolidWorks. I've used these programs to complete projects at work that I would not have been able to accomplish without this prior knowledge." The July following high school graduation, Alexa began her first work experience at General Motors in Manufacturing Engineer-

ing. You might be wondering; how did that happen so quickly? Alexa explains, "While I was still in high school, I participated in Kettering's Co-op Job Fair. Ms. Barbara Karchin helped me compose my resume which showcased the 3D modeling skills I learned in my CTE courses. That resume from high school is now a living document that I update as needed. CTE preparation in interviewing helped me to be articulate in my first real interviews. I was pleasantly surprised to find that every interview slot was booked with a variety of potential employers. I wanted to pursue a co-op experience with robots, and I was invited to several second interviews. I had a difficult choice, but ultimately, I opted to accept the GM opportunity."

What is Alexa doing now? As a Senior at Kettering, Alexa still works at GM as a Manufacturing Engineer co-op at the GM Tech Center. "Every three months I have rotated groups within the Vehicle Systems organization to give me some well-rounded experience. I am assigned one project/goal, solving a problem, or identifying savings in resources. Sometimes there are side projects that require testing. I have learned how to be very effective in analyzing data using Excel. I am currently wrapping up work on my senior thesis related to robotic safety technology. Safety is a number one priority at GM. I also learned the importance of safety in high school from Mr. Youngblood as he taught me fabrication skills in the Fab Lab. I am hoping to be offered a full-time position after graduation in the GM Track Program that includes four, 6-month rotations which would put me on the upper-case track for future growth." As a female in a non-traditional career field, Alexa reports, "I have been treated as a professional in all of my experiences, both in my co-op rotations and in college."

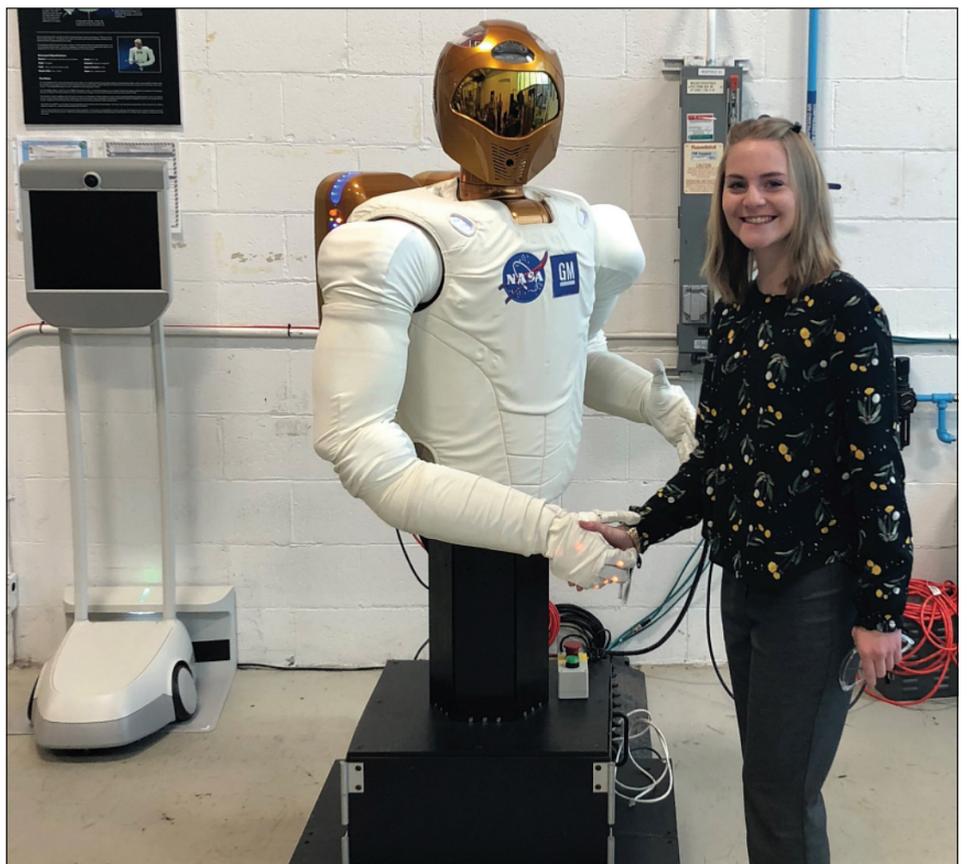
What advice does Alexa have for middle or high school students? "Take some time to explore all of the options you have, consider possibilities, watch videos about any job that may be of interest. Work to develop strong study habits; courses in college are 10x harder than high school. Take advantage of CTE; you may never know what interests you until you try it. I know that if I did not take that leap into my first CTE class, I would have never discovered my interest in engineering. I would not be where I am today, and I am fully confident, that I would not even be pursuing engineering had it not been for that decision. The projects, field trips, and other opportunities helped me to discover, and later solidify, my decision to pursue this career." Between her paid, co-op experiences at GM and significant scholarships from VEX Robotics and Kettering University, Alexa will soon be graduating with her bachelor's degree in Mechanical Engineering debt free!

*Part 2 of Trailblazing Women of Chippewa Valley Schools CTE will feature Lauren Kindzierski, a woman nationally recognized for her expertise in the field of Customer Experience, or CX. Her world includes digital transformation and artificial intelligence. Check the Dec. 10 edition of the Macomb Daily to read more.*



SUBMITTED PHOTOS

Alexa Bartold (CVHS class of 2017) at one of her co-op work sites at General Motors. "My favorite thing about work and school is my ability to think outside of the box to solve problems. I love critical thinking where the answer is never right in front of you."



Alexa Bartold (CVHS class of 2017) is a senior Mechanical Engineering student at Kettering University and works as a co-op at General Motors. Her areas of greatest interest are safety and robotics. She is currently working on her senior research thesis entitled "Integrating New Safety Technologies into Robot/Operator Shared Workspaces."

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