



COMPRESSED AIR ACADEMY

The Michigan City High School Compressed Air Academy (CAA) is the first of its kind in the nation. It aims to maintain LaPorte County's distinction as an industry leader in the compressed air/gas and vacuum industry by building a workforce of well-prepared, qualified students.

- Michigan City High School piloted the CAA program during the 2018-19 school year. In 2019, the Academy officially launched.
- The CAA is a one- or two-year program. Students who complete Year 1 are prepared for an entry-level position. Students who complete Year 2 are well-prepared for an entry-level position and have the background and experiences to move into intermediate positions within the compressor/vacuum industry.
- CAA students work with industry-grade air compressor and vacuum systems in the classroom. This equipment has been donated by Sullair (a ShopTek 5-50 Industrial Air Compressor), Sullivan-Palatek (a D-15 Industrial Electric direct drive rotary screw air compressor), and Dekker Vacuum Technologies (a VMAX Oil Sealed Liquid Ring Vacuum System). Vanair will be donating additional equipment in 2022.
- In October 2019, the CAA moved to a newly renovated classroom with access to an adjacent flex lab. The flex lab provides space where students taking Manufacturing, Engineering, and Compressed Air courses can work and collaborate on projects. In addition to two industrial-grade compressors and a vacuum system, it features a tabletop CNC system, 3D printers, computers with CAD software, and industrial robotic components.
- In 2021, classroom labs for Manufacturing, Engineering, and Robotics were renovated thanks to a grant from ALCOA Howmet. These spaces, located near the CAA classroom and flex lab, feature CNC machines, 3D printers, and woodworking equipment. Students in after-school programs also utilize the labs for Robotics, eSports, and entrepreneurship construction projects. Students in these programs have built and raced two EV (electric vehicle) go karts for the high school EV Grand Prix, held at Purdue University.
- Thanks to the Skill Up 3 partnership, students have access to the following additional "Skill Boss" equipment in the flex lab: a 3D cutter, an engraver, a Roland cutout designer and press, a manufacturing measurement kit, an AC/DC trainer, an electric relay control trainer, an Allen Bradley trainer, mechatronics trainers, and a pneumatic systems trainer. The Skill Boss materials complement the compressed air curriculum and assist the students in earning dual credits for Advanced Manufacturing.

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- The CAA curriculum was designed by Michigan City Area Schools educators, in consultation with Boss Industries, Dekker Vacuum Technologies, Sullair, Sullivan-Palatek, and Vanair. It centers on the operation, troubleshooting, and repair of compressors and incorporates National Center for Construction Education & Research (NCCER) materials that offer certificates for each level of completion.
- Dual credit in Advanced Manufacturing is offered to students through a partnership with Ivy Tech Community College; students can earn up to 6 dual credits over 2 years.
- CAA students are encouraged to pursue a Core 40 or Core 40 with Technical Honors diploma including a Work Ethic certificate. They may consider following up with additional courses at Michigan City High School (Intro to Construction Design or Intro to Engineering Design, a Project Lead the Way Course) or LaPorte County Career and Technical Education courses (Manufacturing, Welding, Construction, or the Energy Academy).
- CAA students take field trips annually to Fabtech or the IMTS (International Manufacturing Technology Show) in Chicago. They also tour area compressed air companies and hear from guest speakers who are experts in the field.
- Students graduating from the program who wish to continue with Ivy Tech may pursue pathways and certifications in Mechatronics, Automation and Robotics, Industrial Electronics or Industrial Mechanics, and/or an Associate of Applied Science (AAS) degree.
- Several CAA graduates and rising seniors have been hired by Sullair as Assemblers during the summer. Former MCHS students from the CAA, Manufacturing, and Engineering programs have also been hired as interns or are employed full-time with Compressed Air partner companies.