



**FUTURE READY
INSTITUTES**
of Hamilton County

Institute of Robotics and Welding

The Institute of Robotics and Welding prepares students for the mechanical industry of advanced manufacturing. This rigorous curriculum and real-world field experiences will create students proficient in the areas of mechanics, computer and control systems, components of manufacturing systems, metal fabrication, and safety. Upon completion of this institute, students will be eligible to pursue several industry certifications including OSHA 10, Precision Measurement Instruments Certification, and AWS SENSE entry-level welder. Students will also be prepared for advance coursework at postsecondary institutions, which leads to careers as mechatronic technicians, electrical technicians, robotic technicians, and mechatronic engineers.

"The welding program can change a student's life. Personally, I enjoy working with the materials and using different machines." -Elisan, Welding Student

"This institute provides us with unimaginable opportunities." -Macon, Welding Student



Howard High School

www.hcde.org/fri

@HCSFutureReady
@Howard_Ready

Career Technical Education Pathways:

Mechatronics- The Mechatronics program of study is designed for students interested in becoming a mechatronics technician, electrical technician, mechanical engineering technician, robotics technician, or mechatronics engineer. Students will explore the components of electronics, mechanics, fluid power systems, and computer/control systems. Upon completion of this program, students will be prepared to pursue industry certifications and continue advanced coursework at a two-year or four-year postsecondary institution.

Welding- The welding pathway prepares and certifies students as entry-level welders. Students will explore careers, learn safe practices, develop leadership and thermal cutting skills over a series of courses, which will prepare the Entry Level Welder Certification, as defined by American Welding Society QC10.

Student schedules will consist of both Future Ready Institute classes as well as the opportunity to take a variety of classes offered by the particular high school in order to fulfill all graduation requirements. This is the 4 year plan for the student's institute classes only. *DE= Dual Enrollment *IC= Industry Certification

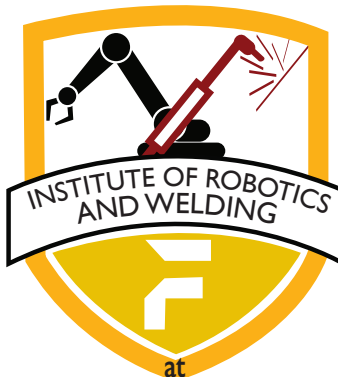
FRI Pathway(s)	Year 1	Year 2	Year 3	Year 4
CTE	Principles of Manufacturing <i>IC: Machining Level I - Measurement, Materials, and Safety Certification -and/or- OSHA 10 -and/or- Precision Measurement Instruments Certification</i>	Welding I <i>IC: AWS SENSE Entry Level Welder -and/or- NCCER Core Curriculum</i>	DE: Welding <i>IC: AWS SENSE Advance Level Welder or American Welding Society Certified Welder -and/or- OSHA 30 General Industry</i>	Manufacturing Practicum
		Digital Electronics	DE: Mechatronics <i>IC: OSHA 30 General Industry</i>	
Core Classes	English 9 Algebra 1	English 10 Geometry	English 11 Algebra 2	English 12 Bridge Math

The Howard High School

2500 Market Street
Chattanooga, TN 37408
(423) 498-6850

Principal- Dr. Leandra Ware
Institute Lead Administrator-
Dr. Charles Mitchell

FRI Coordinator- Zena Buckley
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Partners

FRI Opportunitites:

- Revitalized Welding Lab
- Access to Industry Specific Machines
- Specialized Welding and Fabrication Instruction
- Opportunity to Participate in Custom Design Projects
- Access to Multiple Career Opportunities

