



**FUTURE READY
INSTITUTES**
of Hamilton County

Institute of Architecture and Construction

The Institute of Architecture, Engineer, and Construction is for students with interests in the engineering and design industry.

Students will develop collaboration, problem-solving, and professional skills through the exploration and completion of real-world design projects. Students will work alongside industry partners and develop a proficiency in the creation of design projects to include drawing, rendering, modeling, and building in combination with verbal and written communication. Upon completion of this institute, students will be able to pursue industry certifications including OSHA 10, AutoCAD user, and NCCER Carpentry Level One. Students who dedicate four years to this institute will be prepared for apprenticeships such as The Chattanooga Area Carpentry Apprenticeship Training program and post-secondary training leading to professions in architectural, civil, and mechanical design.

"Chattanooga, TN is growing and there is a need for more homes and buildings. Our institute prepares us to be the future designers for our city!" -Angel; Class of '22

"Choose our institute because we participate in enjoyable, meaningful projects often." -Kenny; Class of '22

Howard High School

www.hcde.org/fri

@HCSFutureReady
@Howard_Ready

Career Technical Education Pathways:

Architectural & Engineering Design- The Architectural and Engineering Design pathway at Howard prepares students for careers in the professions of engineering and design. Students, who successfully complete four years of coursework, will develop specialized critical thinking and problem-solving skills at it relates to identifying relations between resources and project expectations. Students will also learn how to create design solutions for using real-world problems and become proficient in the presentation of information using verbal and written communication. The students culminating experience will include an engineering practicum that places students with industry partners where they will produce a comprehensive design project before an audience.

Structural Systems- The construction pathway at Howard prepares students for careers in residential and commercial carpentry. Students, who successfully complete four years of structural systems coursework will develop various skills and knowledge around framing buildings, installation of interior and exterior finishing, the physics of structural loads and coverings, interpretation of construction drawings, and safe working practices. Standards throughout this pathway provide students with a comprehensive understanding of principles in the construction and business industry, setting the foundation for careers in project management.

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	Architectural & Engineering Design I -and- Fundamentals of Construction <i>IC: NCCER Core Curriculum -and/or- OSHA 10</i>	Architectural & Engineering Design II	DE: Architectural & Engineering Design I <i>IC: Certified Solidworks Associate -and/or- AutoCAD User</i>	Engineering Practicum
		Structural Systems I <i>IC: NCCER Carpentry Level One -and/or- Precision Measurement Instruments Certification (includes all subtests)</i>	DE: Structural Systems <i>IC: NCCER Carpentry Level Two -and/or- OSHA 30 Construction</i>	Construction Practicum
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 Opportunities:

- Access to VW eLab
- Participation in ACE Mentorship Program
- Ability to Create 3D Designs
- Design Plan for Real-World Clients
- Opportunities to Build Robots
- Tours to Area Construction Sites

