



**FUTURE READY  
INSTITUTES**  
of Hamilton County

# Institute of Innovative Engineering

Members of the Innovative Engineering Institute at East Hamilton Middle High School follow the tinker, innovate, engineer (TIE) approach to engineering. TIE aims to instill in its members an understanding and mastery of the Tinker, Innovate, Engineer process. Through challenging coursework and hands on work, students will see problem solving, teamwork, and personal growth as processes that involve exploration, creativity, and attention to context and details. Students will be encouraged to dare to think big while taking small steps. They will grow to value failure as an opportunity to reflect upon designs and identify productive options for further experimentation and exploration. TIE institute students study science and math within their cohort, following a computer science foundations pathway. Students engage in hands on periodic projects within their TIE cohort directed studies.

*"TIE has provided me with a hands on experience that has allowed me to network with professionals in my future career field. It has broadened my horizons." -Benjamie*

*"It's allows me to open up and express myself while innovating at the same time" -Jacob*

*"We are able to work in groups and develop our communication skills while networking with big name professionals in the field." -Sue*

# East Hamilton High School

## Career Technical Education Pathways:

**Advanced STEM Applications-** program of study is uniquely structured to offer students an overview of STEM fields, occupations, and applications in the first year, followed by more specialized study of the scientific inquiry or engineering design process in subsequent years culminating in a portfolio and internship experience. Upon Completion of this POS, students will be prepared to pursue advanced study in the STEM field of their choice at a variety of postsecondary institutions.

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 \*AP= Advanced Placement

FRI Pathway(s)	Year 1	Year 2	Year 3	Year 4
<b>CTE</b>	VW eLab  -and-  STEM 1: Foundations	VW eLab  -and-  STEM II: Applications	<b>DE: Engineering</b>	STEM Practicum
<b>Core Classes</b>	Physical World Concepts  Geometry	Chemistry  Algebra 2  Scientific Research	Physics	Physics Magnetism  AP Physics  AP Calculus

### East Hamilton Middle High School

2015 Ooltewah Ringgold Road  
Ooltewah, TN 37363  
(423)893-3536

**Principal-** Mr. Brent Eller  
**FRI Lead Administrator-**  
Mr. Matt Thurman

**FRI Lead Teacher-** Peyton Johnson  
johnson\_peyton@hcde.org



### FRI Opportunities:

- Industry certifications
- Networking with industry professionals
- State of the art VW eLab
- Dual Credit opportunities

## Partners



**TENNESSEE COLLEGE  
OF APPLIED TECHNOLOGY**  
CHATTANOOGA

