



DESIGN THINKING—9th Grade

Students are immersed in the Design Thinking Process (empathy, define, ideate, prototype, feedback, reflect) through hands-on projects in small learning communities. These projects focus on skills in math, science, technology, and engineering as it applies to advance manufacturing. This course consists of on-site and off-site learning opportunities partnered with industry professionals. Focus is placed on creative problem-solving processes and collaboration skills. The goal of this class is to challenge students to focus on solutions to relevant industry problems.

“MADE requires you to be a different kind of thinker that isn’t limited by any boundaries.”

Tomas Bassalious, Class of 2022

PATHWAY ROTATION—10th Grade

Students rotate through a 10 to 12-week exploratory unit for each of the three academy majors: Automation, Fabrication, and Design Engineering. This class includes introductory projects, skill development, and pathway points of interest. Upon completion students are prepared to choose an academy major.

AUTOMATION

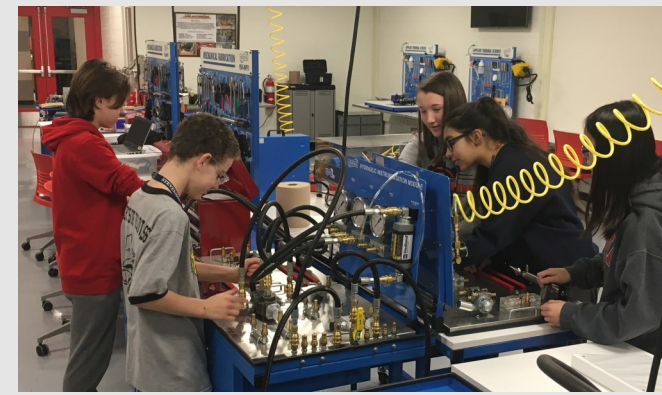
Students combine multiple tasks into a single automated action using electrical, fluid-power, pneumatic, and mechanical systems. Students work with robotics, electronics, simulators, and programmable control systems to complete a sequence of tasks.

FABRICATION

Students build fundamental and operational skills of welding and machining. Precision measurements, proper safety, working properties of metals, and the principles of science and mathematics as applied to machining practices are the focus.

DESIGN ENGINEERING

Students learn how to create and interpret industry drawings using common terms and symbols. 3-Dimensional CAD modeling, orthographic projections, sectioning, and dimensioning techniques are taught to meet industry standards.



INDUSTRY MAJOR—11th and 12th Grade

As juniors, students choose a major and begin focusing on challenges proposed by industry partners to develop their pathway skills. Senior MADE students complete a senior capstone with multiple internship or externship opportunities.



CORE CLASSES

All Stevenson MADE students complete their core academic courses, as required by the state, within the MADE academy. Math, social studies, English, and science course standards are intertwined with connections relevant to the academy pathways.

INNOVATIVE

Students focus on solutions to relevant industry problems and change mindsets on how they approach challenging situations. Immersed in this academy culture, students are more prone to share ideas, tolerate failure, and contribute to overall achievement.

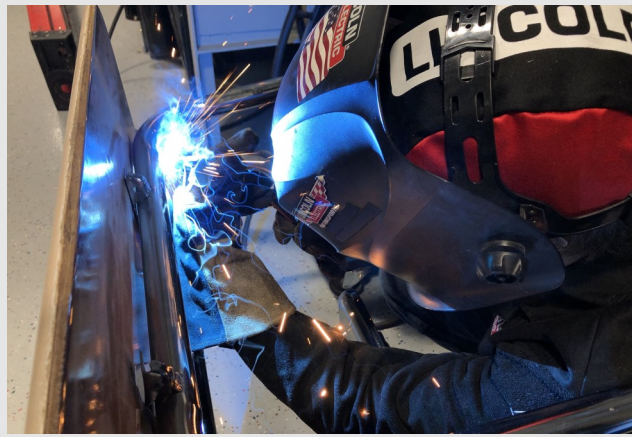


ENGAGING

Students are active participants in their learning from the beginning. Starting with innovative projects in Design Thinking, to the industry driven challenges in advanced coursework, student voice is present. Core academic courses are taught through the lens of Automation, Design Engineering, or Fabrication, bringing relevance to students and deeper understanding of the subject matter.

“In MADE failures are only lessons we can learn from.”

Greta Kaminske. Class of 2022



INDUSTRY FOCUSED

Students work in teams to demonstrate their learning in real-world challenge competitions presented to industry leaders. It is the expectation that every Stevenson MADE student graduate having completed multiple work-based learning experiences. Students will align with professionals to complete job shadowing experiences and internships. They will leave with industry credentials, articulated college credit, and a clear post-secondary plan.

“MADE students learn how to not only seek problems, but also solve them.”

Kyle Carbary, Class of 2022

For more information contact:

Alison Hildebrand, Academy Principal

(586) 797-1900

alison.hildebrand@uticak12.org



**CENTER FOR MANUFACTURING,
AUTOMATION, AND DESIGN
ENGINEERING**

The Center for Manufacturing, Automation, and Design Engineering is a four-year program in which students choose a major and a minor in one of the career pathways: Automation, Fabrication (welding and CNC machining), or Design Engineering. Course work connects the core subjects—math, science, social studies, and English—to the field of Advanced Manufacturing. Students make real-world connections and participate in project-based learning that focuses on problem-solving and design thinking.



Stevenson MADE

4 Year Full Immersion Academy Map

- 9th Grade
- Core classes in academy: English 9/Honors English 9, U.S. History/AP U.S. History, Biology, Algebra I/ Accelerated Geometry, Accelerated Algebra II
 - Academy course: Design Thinking
 - +1 Global class
- 10th Grade
- Core classes in academy: English 10, Honors English 10, World History, AP World History, Algebra II, Accelerated Algebra II, and Honors Chemistry
 - Academy course: Introduction to Advanced Manufacturing (Automation, Fabrication, and Design Engineering rotation)
 - +1 Global class

Automation Major

Fabrication Major

Design Engineering Major

- 11th Grade
- | | | |
|--|---|--|
| <ul style="list-style-type: none"> • Core classes in academy: English 11, AP English 11, Geometry, Foundations of Calculus, U.S. Government, AP U.S. Government, Economics, AP Economics, Chemistry or Physics • Academy course: Automation • +1 Global class | <ul style="list-style-type: none"> • Core classes in academy: English 11, AP English 11, Geometry, Foundations of Calculus, U.S. Government, AP U.S. Government, Economics, AP Economics, Chemistry or Physics • Academy course: Fabrication (Welding and CNC Machining) • +1 Global class | <ul style="list-style-type: none"> • Core classes in academy: English 11, AP English 11, Geometry, Foundations of Calculus, U.S. Government, AP U.S. Government, Economics, AP Economics, Chemistry or Physics • Academy course: Design Engineering • +1 Global class |
|--|---|--|
- 12th Grade
- | | | |
|---|---|---|
| <ul style="list-style-type: none"> • Core classes in academy: English 12, AP English 12 • Academy course major: Automation Capstone • Academy course minor: Fabrication I or Design Engineering I • +2 Global classes | <ul style="list-style-type: none"> • Core classes in academy: English 12, AP English 12 • Academy course major: Fabrication Capstone • Academy course minor: Design Engineering I or Automation I • +2 Global classes | <ul style="list-style-type: none"> • Core classes in academy: English 12, AP English 12 • Academy course major: Design Engineering Capstone • Academy course minor: Automation I or Fabrication I • +2 Global classes |
|---|---|---|

*Students will also have access to all advanced math and science courses offered at Stevenson.