ENGINEERING & ROBOTICS

NYS CIP CODE: 15.0405

Program Summary

- Through hands on learning projects and skill based competitions, Engineering and Robotics students prepare for the future by learning how to develop their ideas from concept to reality.
- Throughout the Design Process, we can take an idea and create just about anything you can conceptualize.
- Spend some time with us and learn how to build a trebuchet, help us to develop the technology necessary to create a 3D printed “bobblehead”, or create 3D printable parts and artwork from black and white pictures.
- Utilizing classroom technology, we build a pumpkin-throwing trebuchet for annual competition, and a variety of robots for competitions within the classroom, at Tech Wars.
- Learn how to be productive in all work situations. Whether working alone, within a group, or leading a team of professionals in order to solve real-world problems in real-world situations.

College Credit Connections

- Bryant and Stratton College
- Rochester Institute of Technology - PLTW
- SUNY Canton
- SUNY Erie
- University of Northwestern Ohio

Career Pathways

Professional Careers

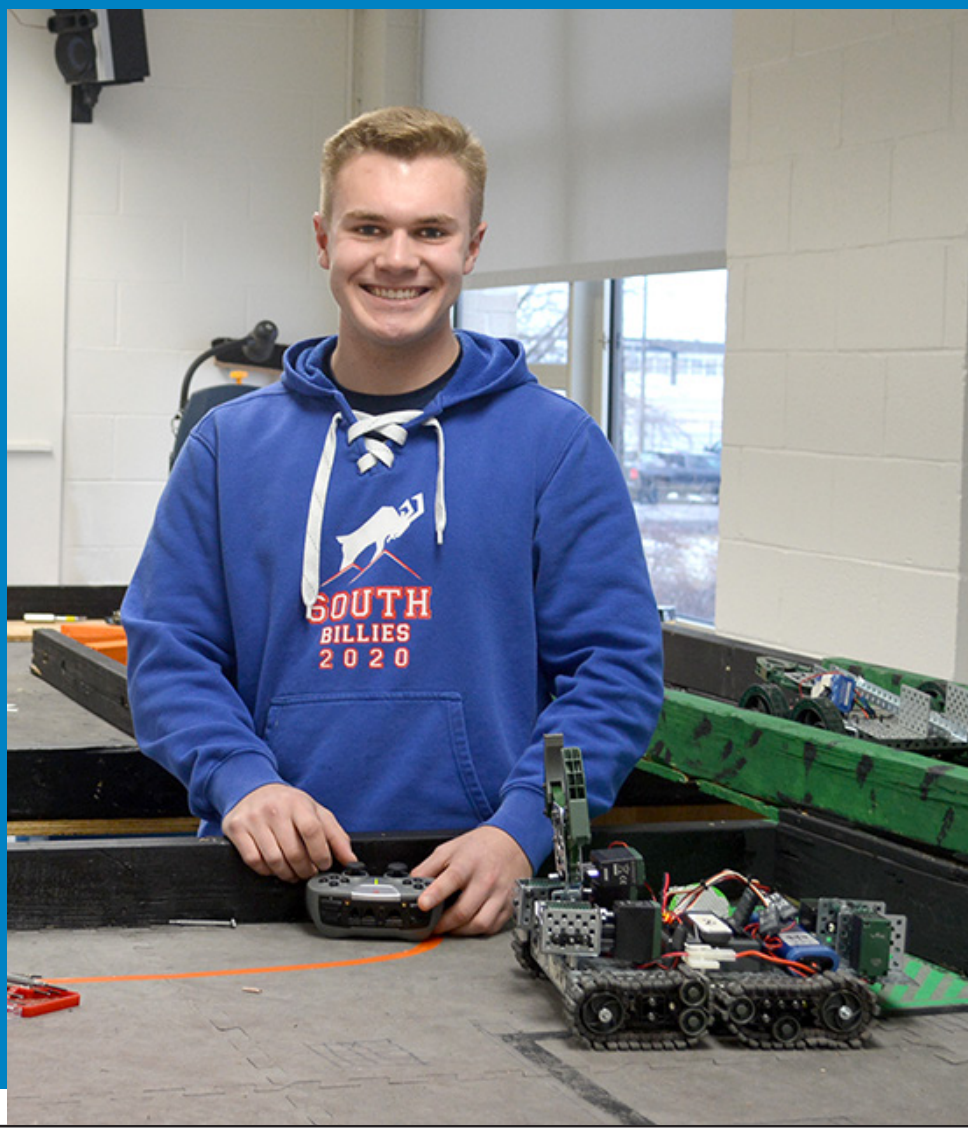
Aerospace Engineer
Architect
Chemical Engineer
Civil / Structural / Environmental Engineer
Computer Science Engineering
Design Engineer
Electrical Engineer
Engineering Manager
Industrial Engineer
Mechanical Engineer
Manufacturing Engineer
R&D Engineer
Robotics Engineer
Stationary Engineer

Technical Careers

Application Developer
Computer-Control Programmers and Operators
Data Analyst
Database Administrator
Electrical Engineering Technologist
Electrical Technologist
Manufacturing Technologist
Mechanical Engineering Technologist
Technology Project Manager

Entry Level Careers

Advanced Manufacturing
CAD Designer
CNC Programmer
Production Scheduler
Repair Technician
Robotics Programmer
Software Developer
Web Developer



ENGINEERING & ROBOTICS

Engineering Essentials

- Students explore the breadth of engineering career opportunities and experiences as they solve engaging and challenging real-world problems like creating a natural relief center system or creating a solution to improve the safety and well-being of citizens.

Introduction to Engineering Design

- Students dig deep into the engineering design process applying math, science, and engineering standards to hands-on projects like designing a new toy or improving an existing product.

Principles of Engineering

- Students explore a broad range of engineering topics including mechanisms, strength of structure and materials, and automation, then apply what they know to take on challenges like designing a self-powered car.

Computer Integrated Manufacturing

- Students discover and explore manufacturing processes, product design, robotics, and automation, and then apply what they have learned to design solutions for real-world manufacturing problems.

Engineering Design and Development

- Students identify a real-world challenge and then research, design, and test a solution, ultimately presenting their unique solutions to a panel of engineers.