



# ENGINEERING & TECHNOLOGY

## PATHWAY



### PATHWAY OVERVIEW

The Engineering & Technology pathway helps students build knowledge and hands-on skills in engineering design, manufacturing systems, automation, and technical problem solving.

Through Foundations of Engineering & Technology, Engineering Concepts, and Engineering Applications, students prepare for postsecondary education, industry credentials, and work-based learning experiences connected to the field.



### CAREER CLUSTER

**Advanced Manufacturing**

### COURSE SEQUENCE + WORK-BASED LEARNING

1

#### Foundations of Engineering & Technology

Introduces the engineering design process, problem-solving, technical communication, measurement, and foundational engineering principles.



2

#### Engineering Concepts

Develops engineering skills through CAD, modeling, systems thinking, design challenges, and testing solutions.



3

#### Engineering Applications

Applies engineering knowledge to complex, real-world problems through design, prototyping, testing, and collaborative projects.



#### Work-Based Learning (Capstone Experience)

Apply energy, engineering, and manufacturing skills through projects, design challenges, internships, and supervised industry experiences.

### LEADERSHIP + INDUSTRY CONNECTIONS

#### CAREER & TECHNICAL STUDENT ORGANIZATION



#### COMPETITION OPPORTUNITIES

- TSA Engineering Design
- CAD Engineering
- Architectural Design
- Structural Design and Engineering
- FIRST Robotics Competition



#### CHAPTER ACTIVITIES

- Design challenge
- Hybrid Racer XL
- Technology Bowl
- TEAMS
- Drone Challenge
- Leadership Conferences



#### CO-CURRICULAR / INDUSTRY EXPERIENCES

- VEX Robotics
- Industry tours
- Industry panels
- Engineering design and industry projects
- College tours

### SCHOOLS OFFERING THIS PATHWAY

Alpharetta | Benjamin Banneker | Cambridge | Chattahoochee | Creekside | Global Impact Academy | Innovation Academy | Johns Creek | Langston Hughes | Milton | North Springs | Northview | Riverwood International Charter | Roswell | Tri-Cities | Westlake

### POSTSECONDARY OPPORTUNITIES



#### LOCAL / REGIONAL INSTITUTIONS

- Georgia Institute of Technology
- Kennesaw State University
- Atlanta Technical College
- Gwinnett Technical College



#### DUAL ENROLLMENT

Metro-area dual enrollment options may include manufacturing, engineering technology, mechatronics, robotics, industrial systems, drafting, or production technology; verify through Georgia Futures.



### CAREER OPPORTUNITIES

#### CAREERS

Engineer

CAD Designer

Product Development Specialist

#### ATLANTA-AREA EMPLOYERS

