Redefine what is possible through CAD & Engineering Technologies! Students will use the latest industry standard software and equipment to produce working drawings, 3D solid model designs, parts and assemblies. Additionally, students will have the opportunity to program and operate CNC machines (router, lathe, mill and water jet) to produce manufactured products using wood, metal, and plastic. Students will also operate rapid prototype machines (3D printer) laser engraver in fabricating various engineered and designed products. Manufacturing and welding processes and industries will be explored. This exciting, professional Career-Technical Education offering is designed to prepare students for careers in the engineering, advanced manufacturing and architectural career fields. Senior level internships/industry placement opportunities are available to qualified students. Advanced technologies, coupled with the need to update and improve manufacturing facilities and product design, should fuel the demand for professionals in computer-aided manufacturing, architecture, and engineering technologies. According to the latest data, 7,400 jobs within a 100 mile radius of Akron, Ohio currently exist. Upon successful completion of the program, students will be eligible to earn college credits (CTAG) to any Ohio public university for Computer-Aided Drafting and Design in an Engineering Technology program.

Skills necessary for success
- Detail-oriented problem solver
- Ability to visualize projects
- Affinity for mathematics
- Ability to work independently and as a team member
- Positive attitude, critical thinker
- Interest in designing and building
- Use and implement precise measurements and calculations

Professional pathway
- Engineering technician
- Machine Technician
- Manufacturing Engineer
- Architect
- CNC programmer/operator
- Landscape architect
- CAD Designer
- Interior designer
- Furniture Engineering Draftsman
- Machinist

Recommendations
- Excellent attendance record
- Geometry
- Minimum 2.5 GPA
- Utilize computer technologies

COURSES & CREDITS:
Level I: Adv or CP English 1cr (4.5 or 4.0); IA Manufacturing Operations 1.5cr (5.0); IB Manufacturing Design 1.5cr (5.0)
Level II: IIA Machine Tools 1.5cr (5.0); IIB Mills & Lathes 1.5cr (5.0). Capstone 1cr (4.0); Optional Adv or CP English 12 (must arrive TRHS by 10:50am)
4.5 or 5.0=credit weighted on a 4.0 scale

Career interests/helpful background
- Computer technology
- Manufacturing process
- Blueprint design or production
- Keyboarding skills

Higher education opportunities
- College credits available. See page 37.
- Bachelor’s degree
- Associate’s degree
- Internships