

PROGRAM GUIDE

BUCKS COUNTY TECHNICAL HIGH SCHOOL

BCTHS

This is the Official Program Guide for
Bucks County Technical High School.

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610 Wistar Rd, Fairless Hills, PA 19030

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www.bcths.com



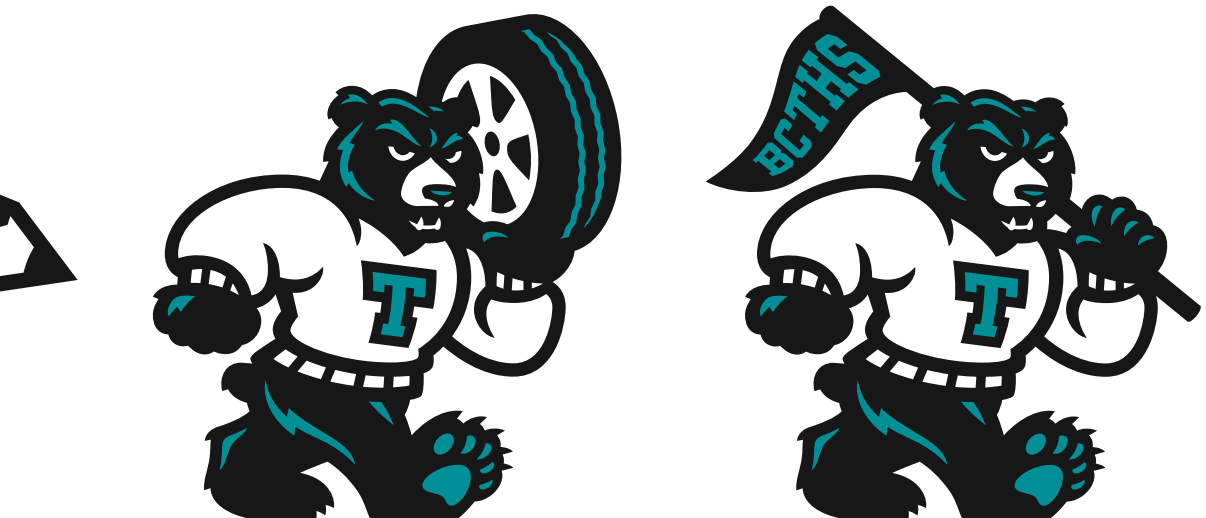




PROGRAM GUIDE

BUCKS COUNTY TECHNICAL HIGH SCHOOL

BCTHS





The Main Entrance of
Bucks County Technical
High School, 610 Wistar Rd,
Fairless Hills, PA 19030

BCTHS IS A TECHNICAL HIGH SCHOOL **WHERE** STUDENTS GAIN PRACTICAL EXPERIENCE, EXPLORE **CAREERS** IN MANY FIELDS, AND **BEGIN** PREPARING FOR A SUCCESSFUL FUTURE.

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OUR MISSION



The front facade of Bucks County Technical High School, 610 Wistar Rd, Fairless Hills, PA 19030

Our mission, in cooperation with participating school districts, is to prepare all students for careers, post-secondary education, and life-long learning, by providing knowledge and practical skills through high quality, integrated, standards-driven curriculum, access to current technologies, work-related experiences, and partnerships within the community. We are **WHERE CAREERS BEGIN.**

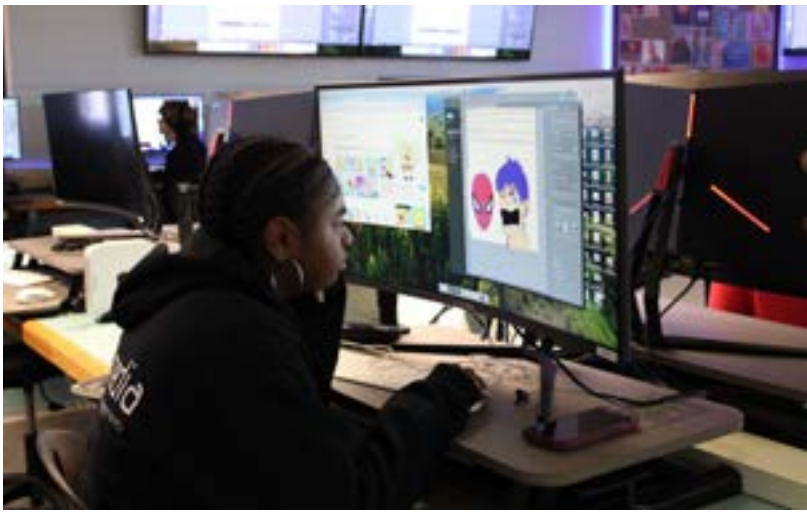


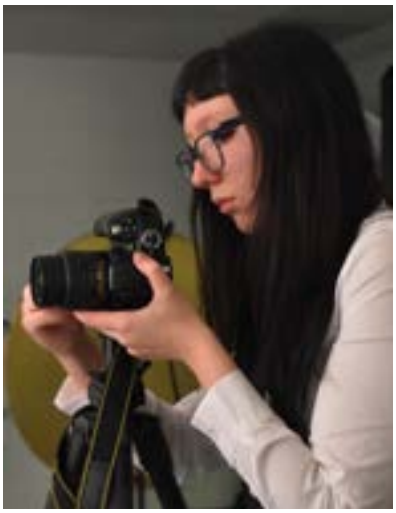
BCTHS



BUSINESS, ARTS & TECHNOLOGY











BUSINESS, ARTS & TECHNOLOGY

COMMERCIAL & ADVERTISING ART

This clustered program equips creative individuals with professional techniques to effectively develop visual communication solutions tailored to various business and consumer audiences. The curriculum covers concept design, content creation, illustration, fine art, typography, digital photography, digital imaging, web portfolio development, and graphic design. Graduates can pursue multiple career pathways, including entry-level positions in print shops, design studios, corporate art departments, event and studio photography, publishing houses, art studios, and advertising agencies. They may also choose to further their education in graphic design, advertising/marketing, fine arts, art therapy, or art education at a post-secondary institution.

PROGRAM CONCENTRATIONS

Drawing & Illustration
Color Theory & Application
Digital Imaging
Design, Layout, & Production
Typography
Adobe Software
Digital Photography
Professional Practices

CAREER PATHWAYS

Graphic Design Assistant
Print Production Artist
Digital Media Technician
Graphic Designer
Branding Specialist
UX/UI Designer
Commercial Photographer
Illustrator
Art Director
Creative Director
Marketing & Advertising Designer
Art Education
Art Therapy

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College
Penn College of Technology
Butler County Community College
Community College of Allegheny County
Harcum College
Harrisburg Area Community College
Lehigh Carbon Community College

WAGES FOR RELATED OCCUPATIONS (2025)

PHOTOGRAPHERS
Entry-Level Annual Wage: $28,510
Experienced Annual Wage: $95,750

COMMERCIAL & INDUSTRIAL DESIGNERS
Entry-Level Annual Wage: $44,120
Experienced Annual Wage: $100,780

GRAPHIC DESIGNERS
Entry-Level Annual Wage: $36,420
Experienced Annual Wage: $80,210

CERTIFICATIONS

Adobe Certified Professional
- Adobe Illustrator
- Adobe Photoshop
- Adobe InDesign

Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Multimedia Digital Design & Programming
- Entrepreneurship & Small Business Development
- Fine Woodworking



BUSINESS, ARTS & TECHNOLOGY

ENTREPRENEURSHIP & SMALL BUSINESS DEVELOPMENT

The Entrepreneurship & Small Business Development program prepares students for self-employment and small business careers by building an entrepreneurial mindset. Students develop skills in business planning, marketing, management, accounting, and technology, with emphasis on employability, soft skills, and real-world experience. Through ventures like Tasty Tech Cafe, Bear Claw Goods, and Career Consultation Services, students gain hands-on practice. Junior and senior students also run virtual businesses, providing a solid foundation for workforce entry or post-secondary education in small business development.

PROGRAM CONCENTRATIONS

Business Fundamentals
Entrepreneurship
Principles of Management
Human Resources Management
Accounting
Business Math
Computer Applications
Marketing, Advertising, & Sales
Small Business Management
Customer Service
Product Development
Supply Chain Management
Certification
Career Education & Work

CAREER PATHWAYS

Administrative Assistant
Office Coordinator
Customer Service Representative
Business Analyst
Operations Manager
Sales Supervisor
Business Executive
Management Consultant
Entrepreneur/Business Owner

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

MANAGERS
Entry-Level Annual Wage: $78,770
Experienced Annual Wage: $137,400

GENERAL AND OPERATIONS MANAGERS
Entry-Level Annual Wage: $47,280
Experienced Annual Wage: $99,140

CERTIFICATIONS

Heartsaver AED, CPR & First Aid
Internet & Computing Core Certifications (IC^3)
S/P2 Human Resources
S/P2 Soft Skills
Microsoft Office Specialist (MOS)
- Microsoft Word
- Microsoft PowerPoint
- Microsoft Publisher
- Microsoft Excel

National Retail Federation
Small Business Administration
Student - Social Media Marketing
EverFi - Personal Finance, Entrepreneurship
ServSafe Food Handler
ACT National Career Readiness
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Commercial & Advertising Art
- Culinary Arts



BUSINESS, ARTS & TECHNOLOGY

MULTIMEDIA DIGITAL DESIGN & PROGRAMMING

Multimedia Digital Design & Programming is a career and technical program that prepares students to apply HTML, XML, JavaScript, programming, graphics applications, digital animation, and other authoring tools to the design, editing and publishing (launching) of documents, images, graphics, sound and multimedia products. This program includes instruction in programming, Internet theory, web page standards and policies, elements of web page design, user interfaces, vector tools, special effects, interactive and multimedia components, search engines, navigation, relational databases, morphing, e-commerce tools, and emerging web technologies.

PROGRAM CONCENTRATIONS

Foundations of Information Technology
Computer Applications
Fundamentals of Computer Operation
Network Fundamentals
Creating Graphic Content
Principles of Layout & Design
Multimedia Presentation/Projects
Legal & Ethical Issues in Internet Technology
Career Preparation
Client Relations
Design & Create Websites
Cascading Styles
JavaScript Fundamentals

CAREER PATHWAYS

Web Development Assistant
Digital Media Specialist
Content Management Assistant
Web Developer
Multimedia Designer
SEO Specialist
Software Engineer (Web & Multimedia)
Digital Marketing Manager
UX/UI Designer

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

WEB DEVELOPERS
Entry-Level Annual Wage: $48,190
Experienced Annual Wage: $87,260

NETWORK & COMPUTER SYSTEM ADMINS
Entry-Level Annual Wage: $58,690
Experienced Annual Wage: $93,430

COMPUTER PROGRAMMERS
Entry-Level Annual Wage: $58,180
Experienced Annual Wage: $92,780

CERTIFICATIONS

Adobe Certified Professional
- Adobe Illustrator
- Adobe Photoshop
- Adobe InDesign
- Adobe Animate
- Adobe After Effects
- Adobe Premiere Pro
- Adobe Dreamweaver
- Adobe Express
- Visual Design
- Web Design
- Video Design

Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Computer Systems & Cybersecurity
- Commercial & Advertising Art

BCTHS



ENGINEERING & INDUSTRIAL TECHNOLOGY: CONSTRUCTION













EIT: CONSTRUCTION

CARPENTRY

The Carpentry Program offers students extensive hands-on training and in-depth knowledge in construction safety, tool use, blueprint reading, estimating, framing, finishing, and green building technology. Students develop their skills through a variety of real-world projects, working both individually and in collaborative teams to simulate professional job site environments. The curriculum is enriched with guest speakers, site visits, and opportunities to earn valuable industry-recognized certifications. Emphasis is placed on mastering carpentry principles, practical construction techniques, and problem-solving skills essential to the trade. By the end of the program, graduates are well-prepared for entry-level positions in the construction industry or further study, equipped with both technical expertise and insight into career opportunities gained through immersive, career-focused, and industry-connected experiences.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Occupational Safety
Hand & Power Tools
Blueprints Reading
Site Preparation & Layout
Footings & Foundations
Framing - Floor, Wall, Roof Construction
Exterior & Interior Finish
Estimation
Materials & Fasteners
Employability
Green Technology

CAREER PATHWAYS

Apprentice Carpenter
Rough Carpenter
Finish Carpenter
Construction Foreman
General Contractor
Cabinetmaker
Construction Manager
Civil Engineer
Building/Construction Inspector

COLLEGE CREDIT OPPORTUNITIES

Delaware County Community College
Thaddeus Stevens College of Technology

WAGES FOR RELATED OCCUPATIONS (2025)

CARPENTERS
Entry Level Annual Wage: $34,870
Experienced Annual Wage: $58,910

HELPERS
Entry Level Annual Wage: $31,180
Experienced Annual Wage: $39,540

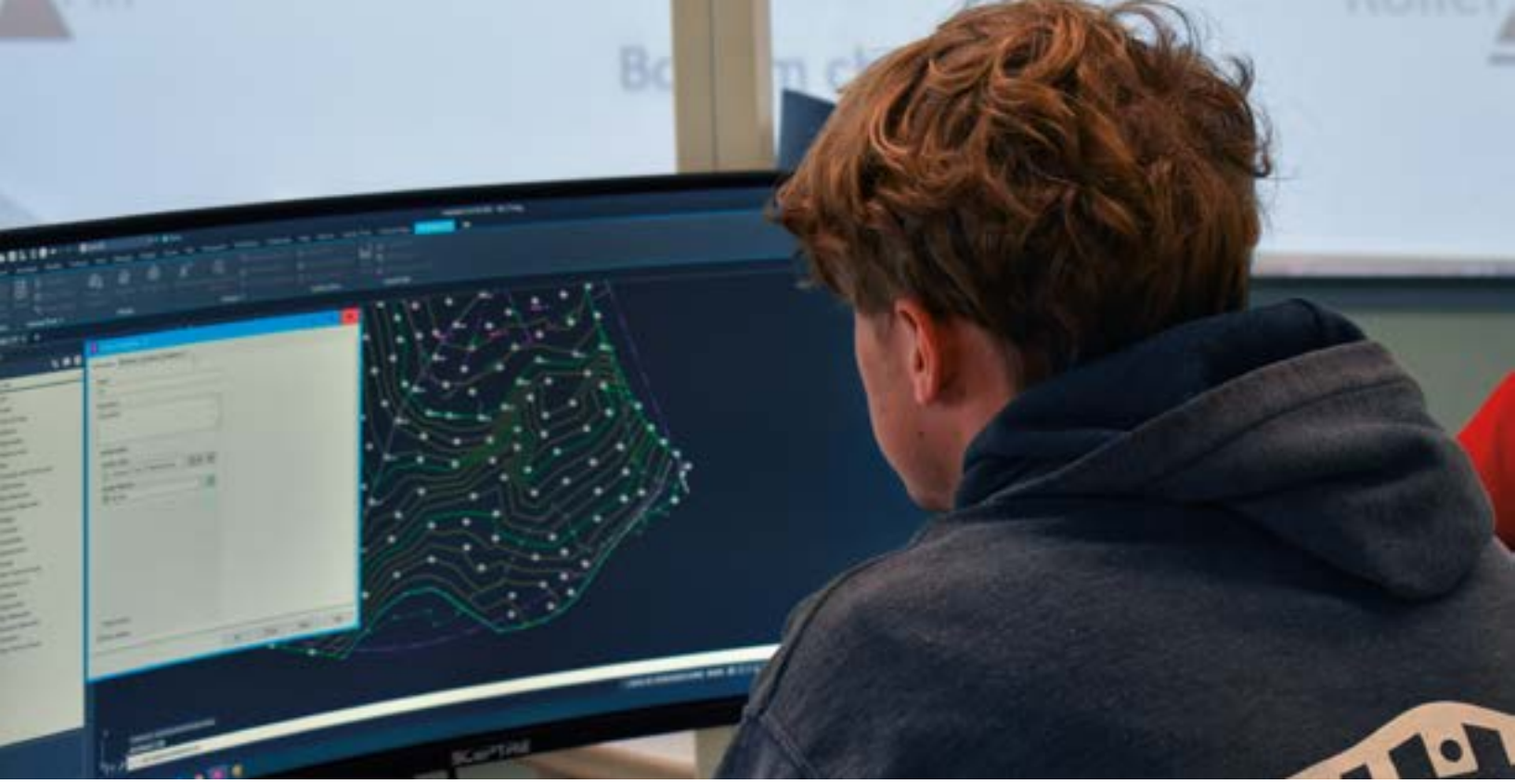
CONSTRUCTION MANAGERS
Entry Level Annual Wage: $81,040
Experienced Annual Wage: $121,000

CERTIFICATIONS

Articulated Ladder
Mobile Ladder
Step Ladder
Single & Extension Ladder
S/P2 Construction
Ramset PAF
Residential Construction Academy (RCA)
National Registry
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Fine Woodworking
- Civil Engineering Technology



EIT: CONSTRUCTION

CIVIL ENGINEERING TECHNOLOGY

The Civil Engineering Technology program blends Land Surveying, Civil Engineering, Architecture (BIM), Mechanical Drafting, GIS, and Construction Management into a hands-on, co-op-based learning experience. Students use industry-standard software such as Autodesk, Bentley, Carlson, and ArcGIS for 3D modeling and 2D drafting. The curriculum covers surveying, land development, blueprint reading, coordinate geometry, stormwater management, and environmental engineering, supported by extensive lab and fieldwork. Emphasis is placed on drafting workflows, technical skills, and real-world application. Graduates are prepared for entry-level roles in surveying or construction or to pursue a college degree in Civil Engineering.

PROGRAM CONCENTRATIONS

Geometric Construction
Freehand Drawing and Sketching
Introduction to Engineering Math
Mechanical Drawing & Design
Dimensioning
Architecture
Civil Drafting
Electronic Drafting
Computer Assisted Drafting (CAD)

CAREER PATHWAYS

CAD Technician
Drafting Assistant
Architectural Drafter
Mechanical Drafter
Civil Engineering Technician
BIM (Building Information Modeling) Specialist
Architect
Mechanical Engineer
Industrial Designer

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College
Johnson College
Northhampton County Area Community College
Thaddeus Stevens College of Technology
Westmoreland County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

ARCHITECTURAL & CIVIL DRAFTERS
Entry-Level Annual Wage: $39,720
Experienced Annual Wage: $94,580

MECHANICAL DRAFTERS
Entry-Level Annual Wage: $38,720
Experienced Annual Wage: $65,953

DRAFTERS, ALL OTHERS
Entry-Level Annual Wage: $41,173
Experienced Annual Wage: $89,232

CERTIFICATIONS

Autodesk Certified User
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Carpentry
- Electrical Occupations Technology
- Machine Technology
- Fine Woodworking



EIT: CONSTRUCTION

ELECTRICAL OCCUPATIONS TECHNOLOGY

Students study fundamental physics, mathematics, and the principles of DC and AC circuits, along with interpreting construction plans and electrical diagrams. They gain practical skills in residential, commercial, and industrial applications, including wiring, metering, security systems, motors, and controls. This comprehensive training prepares them for journeyman electrician positions or further education in electrical engineering. Graduates who successfully complete the course earn a one-year credit toward the evening apprenticeship program offered by BCTHS.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Occupational Safety
Hand & Power Tools
Blueprints Reading
Anchors & Supports
Residential Cabling Technology
Switches & Receptacles Circuits
Fixtures
Raceways
Wired Devices
Testing Equipment
Electrical Service
National Electrical Code (NEC)
Green Technology

CAREER PATHWAYS

Electrical Line Installer
Power Distribution Technician
Solar Photovoltaic (PV) Installer
Power Systems Technician
Substation Technician
Renewable Energy Technician
Electrical Engineer
Renewable Energy Engineer
Smart Grid Engineer

COLLEGE CREDIT OPPORTUNITIES

Johnson College
Rosedale Technical College

WAGES FOR RELATED OCCUPATIONS (2025)

ELECTRICIANS
Entry-Level Annual Wage: $43,690
Experienced Annual Wage: $111,830

ELECTRICAL POWER-LINE INSTALLERS & REPAIRERS
Entry-Level Annual Wage: $38,720
Experienced Annual Wage: $65,953

FIRST-LINE SUPERVISORS OF CONSTRUCTION TRADE
Entry-Level Annual Wage: $51,620
Experienced Annual Wage: $123,700

CERTIFICATIONS

C-Tech Certifications
American Ladder Institute
S/P2 Constriction Safety
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Electronics/Green Energy Technology
- HVAC/R



EIT: CONSTRUCTION

FINE WOODWORKING

The Fine Woodworking program provides students with the skills to design, cut, assemble, and finish custom woodworking projects while mastering blueprint reading and computerized drafting. Training includes the use of state-of-the-art machinery such as CNC laser and router systems, SawStop table saws, jointers, lathes, and other professional-grade tools. Students specialize in high-quality interior woodwork, including flooring, trim, and cabinetry, and apply their skills through school-based and community projects. Juniors and seniors have opportunities to design independent projects, work with clients, and participate in paid co-op placements with local businesses. This combination of technical training, creativity, and real-world application prepares graduates for careers in finish carpentry, further education, or military service, supported by valuable hands-on learning and industry experience.

PROGRAM CONCENTRATIONS

Occupational Safety
Lumber & Cabinet Making Materials
Blueprints Reading
Hand & Power Tools
Stationary Power Equipment
Machining & Related Operations
Cutting & Shaping Common Wood Joints
Glues & Adhesives
Plastic Laminates
Procedures for Assembly
Hardware Installation
Computer Numerical Controlled (CNC) Machines
Finishing Procedures
Installation

CAREER PATHWAYS

Cabinetmaker
Millwork Technician
Woodworking Machine Operator
CNC Woodworking Technician
Furniture Maker
Finish Carpenter
Industrial Designer (Furniture & Cabinetry)
Manufacturing Engineer (Wood Products)
Architectural Woodwork Specialist

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

CABINETMAKERS & BENCH CARPENTERS
Entry-Level Annual Wage: $39,910
Experienced Annual Wage: $61,520

PATTERNMAKERS, WOOD
Entry-Level Annual Wage: $47,270
Experienced Annual Wage: $54,310

CERTIFICATIONS

Architectural Woodwork Institute (AWI)
S/P2 Construction Certification
Pennsylvania Skills Certification (NOCTI)
OSHA Certifications

RELATED COURSES

- Carpentry
- Machine Technology
- Commercial & Advertising Art
- Civil Engineering Technology





EIT: CONSTRUCTION

HEATING, VENTILATION, AIR CONDITIONING & REFRIGERATION

Students study fundamental physics and mathematics, heat transfer, pipe fitting and reading of schematics, and are given extensive theoretical and practical instruction in domestic, commercial and industrial environmental control systems including protocols and safe measurement, handling and reclamation practices of refrigerants. Graduates of HVAC/Refrigeration Technology can find many employment opportunities or continue their higher education in related engineering programs.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Occupational Safety
Tools for HVAC/R
Blueprint Reading
Piping Practices
Basic Electricity
Heating & Cooling
Air Distribution Systems
Hydronic Systems
Leak Detection, Evacuation, Recovery, & Charging
Troubleshooting Heating & Cooling
Heat Pumps
Computer Fundamentals

CAREER PATHWAYS

HVAC Installer
Refrigeration Technician
Residential HVAC Technician
HVAC Controls Specialist
Energy Efficiency Consultant
Commercial HVAC Technician
Mechanical Engineer
HVAC System Designer
Energy Management Specialist

COLLEGE CREDIT OPPORTUNITIES

Community College of Allegheny County
Delaware County Community College
Greater Altoona Career & Technology Center
Johnson College
Luzerne County Community College
Northampton County Area Community College
Rosedale Technical College
Thaddeus Stevens College of Technology
Westmoreland County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

HEATING, A/C & REFRIGERATION MECHANICS & INSTALLERS
Entry-Level Annual Wage: $38,840
Experienced Annual Wage: $71,050

CERTIFICATIONS

EPA Section 608 Certification
Refrigerant 410-A
Trac-Pipe
Gas-Tite
Ladder Certification
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Plumbing & Heating Technology
- Electrical Occupations Technology





EIT: CONSTRUCTION

LANDSCAPING & FLORAL DESIGN

Landscaping & Floral Design students have the opportunity to specialize in either landscaping or floral design and floral shop management. In Landscaping, classroom and laboratory work includes plant identification, care, propagation, soil preparation, landscape planning, and greenhouse crop production. Graduates may choose to enter the landscaping industry, start their own business, or continue college studies in horticulture, forestry, or environmental design. In the Floral Design/Floral Shop Management track, students learn principles of design, display, and the care of live, cut, preserved, and artificial plant materials. Training also covers all phases of marketing, merchandising, and business management, preparing graduates for commercial careers or further business education.

PROGRAM CONCENTRATIONS

Occupational Safety
Safe & Proper Plant Health Care Practices
Basic Botany
Horticulture Business Operations
Soils & Fertilizer
Sustainable Horticulture
Horticulture Technology
History & Current Status of Horticulture
Plant Identification
Horticultural Careers & Opportunities

CAREER PATHWAYS

Greenhouse Technician
Landscape Technician
Florist
Grounds Maintenance Supervisor
Landscape Designer
Horticulture Business Owner
Horticulturist
Agricultural Scientist
Urban Forester

COLLEGE CREDIT OPPORTUNITIES

Delaware Valley University
Pennsylvania Highlands Community College

WAGES FOR RELATED OCCUPATIONS (2025)

LANDSCAPING & GROUNDSKEEPING WORKERS
Entry-Level Annual Wage: $29,110
Experienced Annual Wage: $56,060

FIRST-LINE SUPERVISORS OF FARMING, FISHING, & FORESTRY WORKERS
Entry-Level Annual Wage: $35,680
Experienced Annual Wage: $80,450

CERTIFICATIONS

Landscape Safety
National Safe Tractor & Machinery Operator
Pennsylvania Pesticide Applicator Certification
Certified Landscape Technician (CLT)
Pennsylvania Certified Horticulturist (PCH)
ISA Certified Tree Worker/Climber Specialist
Pennsylvania Environment Agricultural Conservation Certification of Excellence (PEACCE)
Pennsylvania Nutrient Management Certification
Worker Protection Standard Training Certification for Greenhouse Workers & Handlers
Pennsylvania Skills Certification (NOCTI)
OSHA Certifications

RELATED COURSES

- Carpentry
- Entrepreneurship & Small Business Development
- Outdoor Power Equipment



EIT: CONSTRUCTION

PLUMBING & HEATING TECHNOLOGY

Plumbing & Heating Technology prepares students for careers as plumbers, pipe fitters, sprinkler fitters, or drain cleaning mechanics. The program provides instruction in the principles of venting, water supply, drainage, heating systems, blueprint reading, and plumbing codes, ensuring a solid theoretical foundation. Students gain extensive hands-on experience joining copper, PVC, CPVC, and cast iron soil pipe, as well as installing and maintaining dishwashers, garbage disposals, faucets, water heaters, and other plumbing fixtures. Training also emphasizes troubleshooting, repair, and preventive maintenance practices. Graduates are well-prepared to enter apprenticeship programs, begin work in the field, or pursue further education in areas such as chemical engineering.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Occupational Safety
Blueprints & Pipe Systems
Pipe Specifications & Materials
Hand & Power Tools
Valves, Fixtures & Appliances
Plastic, Steel, Copper & Cast Iron Pipe
Pipe Hangers & Supports
Water Distribution, Drains, Stacks & Sewers
Ventilation
Plumbing Maintenance & System Testing
Advanced Pipe Fabrication
Pressure Boilers & Hydronic Heating
Ladders & Scaffolds

CAREER PATHWAYS

Plumbing Apprentice
Pipefitter
Residential Plumber
Master Plumber
Plumbing Foreman
Pipefitting Specialist
Plumbing Engineer
Mechanical Systems Designer
Project Manager in Plumbing Construction

COLLEGE CREDIT OPPORTUNITIES

Community College of Allegheny County
Westmoreland County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

PIPELAYERS
Entry-Level Annual Wage: $36,440
Experienced Annual Wage: $58,500

PLUMBERS, PIPEFITTERS, & STEAMFITTERS
Entry-Level Annual Wage: $44,420
Experienced Annual Wage: $101,460

HELPERS—PIPELAYERS, PLUMBERS, PIPEFITTERS, & STEAMFITTERS
Entry-Level Annual Wage: $23,910
Experienced Annual Wage: $36,830

CERTIFICATIONS

Heartsaver AED, CPR & First Aid
EPA Section 608 Certification
Trac-Pipe
Gas-Tite
Ladder Certification
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- HVAC/R
- Carpentry

BCTHS



HEALTH & HUMAN SERVICES













HEALTH & HUMAN SERVICES

ALLIED HEALTH

This college-level cluster program provides a sequence of secondary technical core and academic courses in a program of study. Students will learn to apply knowledge and skills in a variety of healthcare settings. The competencies outlined to cover the specific areas of instruction for the program. Clinical education is an integral part of the program. Science and math courses taught by certified teachers will be coordinated and deemed essential for students to successfully reach their career objectives and post-secondary education. The ideal healthcare worker for any Allied Health career should possess the following traits as identified in the PA Career Guide: Attention to detail, excellent oral and written communication, emotional stability and maturity, computer skills and critical thinking. Math and science skills are important in most allied health occupations. A passion for the profession and caring for people is important.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Occupational Safety
Legal & Ethical Issues
Communication
Infection Control
Emergency Care & Disaster Preparedness
Human Needs & Human Development
Body Mechanics, Moving, Lifting, & Positioning
Personal Care Skills
Urinary Elimination/Bowel Elimination
Nutrition & Hydration
Basic Clinical Skills
Mental Health & Mental Illness
Rehabilitation & Restorative Care
Death & Dying
Medical Terminology
Allied Health Skills
Anatomy, Physiology, & Pathophysiology
Mathematics in Allied Health
21st Century Interpersonal Skills

CAREER PATHWAYS

Medical Assistant
Patient Care Technician
Pharmacy Technician
Surgical Technologist
Radiologic Technician
Respiratory Therapist
Registered Nurse (RN)
Healthcare Administrator
Physician Assistant

COLLEGE CREDIT OPPORTUNITIES

Greater Altoona Career & Technology Center
Pierce College

WAGES FOR RELATED OCCUPATIONS (2025)

MEDICAL ASSISTANTS
Entry Level Annual Wage: $36,490
Experienced Annual Wage: $55,360

RADIOLOGIC TECHNICIANS
Entry Level Annual Wage: $56,780
Experienced Annual Wage: $97,550

REGISTERED NURSES
Entry Level Annual Wage: $72,890
Experienced Annual Wage: $119,440

CERTIFICATIONS

Heartsaver AED, CPR & First Aid
Nurse Aide Registry
Healthcare Provider BLS
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Dental Health
- Emergency Services



HEALTH & HUMAN SERVICES

BAKING & PASTRY ARTS

The Baking & Pastry Arts curriculum provides students with a solid foundation of theoretical knowledge and practical skills needed to excel as professional bakers, cake decorators, pastry chefs, or bakery managers. Through a blend of classroom instruction and hands-on laboratory training, students study the science of food technology, learning techniques for preparing a variety of breads, pastries, sweet goods, and intricately decorated cakes. The program also includes instruction in procurement, costing, pricing, and other essential aspects of retail marketing and bakery management. Graduates are well-prepared to pursue careers in bakeries, restaurants, hotels, and institutions, or to continue their education in food technology, advanced pastry arts, or culinary management.

PROGRAM CONCENTRATIONS

Baking Industry
Sanitation & Safety
Hospitality
Business & Math Skills
Baking Preparation
Baking Fundamentals
Purchasing, Receiving, Inventory & Storage
Nutrition
Baking Planning
Human Relations Skills

CAREER PATHWAYS

Pastry Assistant
Cake Decorator
Bakery Technician
Artisan Baker
Bakery Manager
Chocolatier
Executive Pastry Chef
Food Scientist
Culinary Educator

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College
Delaware Valley University
Delaware County Community College
Luzerne County Community College
Montgomery County Community College
Pennsylvania Highlands Community College
Westmoreland County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

BAKERS
Entry Level Annual Wage: $25,580
Experienced Annual Wage: $47,570

PASTRY CHEFS
Entry Level Annual Wage: $42,700
Experienced Annual Wage: $101,280

FOOD SCIENTISTS
Entry Level Annual Wage: $60,960
Experienced Annual Wage: $140,540

CERTIFICATIONS

Heartsaver AED, CPR & First Aid
ServSafe
- Food Handler
- Manager

S/P2 Culinary Safety
Pennsylvania Food Employee Certification
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Culinary Arts
- Entrepreneurship & Small Business Development



HEALTH & HUMAN SERVICES

CHILD DEVELOPMENT & EARLY LEARNING

The Child Development and Early Learning program is designed for students who are genuinely passionate about educating and nurturing young children. This program equips students for entry-level roles within the childcare sector or for further academic pursuits in early childhood or elementary education. Students will spend around 100 hours annually on observation and hands-on experience with preschoolers at licensed childcare facilities. They will have the opportunity to witness various teaching methodologies and educational philosophies. Additionally, students will rotate through classrooms accommodating children aged six months to ten years, allowing them to apply theoretical knowledge to real-world scenarios in preschool and elementary environments.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Professionalism
Health & Safety
Learning Environment (Physical Space)
Child Development (Social, Emotion, Physical, Intellectual, Language Development)
Classroom Management & Positive Guidance
Standards, Curriculum, & Assessment
Curriculum Development
Learning Activities/Experiences
Program Partnerships
Clinical Experience

CAREER PATHWAYS

Childcare Assistant
Preschool Teacher's Aide
Nanny
Early Childhood Educator
Childcare Center Director
Special Needs Caregiver
Early Childhood Education Specialist
Child Development Researcher
Family Services Coordinator

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

EDUCATION & CHILDCARE ADMINISTRATORS, PRESCHOOL & DAYCARE
Entry-Level Annual Wage: $36,550
Experienced Annual Wage: $94,890

PRESCHOOL TEACHERS
Entry-Level Annual Wage: $28,870
Experienced Annual Wage: $58,530

CHILDCARE WORKERS
Entry-Level Annual Wage: $22,450
Experienced Annual Wage: $43,270

CERTIFICATIONS

Pediatric CPR & First Aid
Child Development Associate (CDA)
Better Kid Care Health & Safety
Mandated Reporter Certification
Pennsylvania Skills Certification (NOCTI)

RELATED COURSES

- Allied Health
- Cosmetology
- Entrepreneurship & Small Business Development



HEALTH & HUMAN SERVICES

COSMETOLOGY

The Pennsylvania State Board of Cosmetology requires 1,250 hours of training for licensure as a cosmetology operator, and this program exceeds those minimum requirements. Students receive comprehensive instruction in all areas of hair, skin, and nail care through a blend of classroom lessons, demonstrations, and extensive hands-on salon experience. The curriculum covers cutting, coloring, styling, chemical treatments, skincare, nail services, and proper sanitation practices, ensuring students meet the highest health and safety standards. Professionalism, client communication, and current industry trends are emphasized to prepare students for real-world success. By program completion, graduates are fully prepared to take and pass the Pennsylvania State Board theory and practical examinations, and they leave with the technical expertise, confidence, and business skills to pursue rewarding careers in the cosmetology field.

PROGRAM CONCENTRATIONS

Bacteriology Disinfection Sanitation
Professional Attitude & Business Practices
Pennsylvania Cosmetology Law
Histology, Trichology, Chemistry, & Physiology
Cosmetic Dermatology
Shampoo & Conditioning
Hair Shaping, Styling, Finger Waving, Coloring, & Straightening
Chemical Texturizing
Permanent Waving
Skin Care
Nail Technology
Temporary Hair Removal
Scalp Treatment
Care of all Hair Types & Textures
Makeup

CAREER PATHWAYS

Hair Stylist
Nail Technician
Makeup Artist
Salon Manager
Esthetician
Cosmetic Sales Representative
Cosmetology Instructor
Product Development Specialist
Beauty Brand Consultant

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

HAIRDRESSERS, HAIRSTYLISTS, & COSMETOLOGISTS
Entry-Level Annual Wage: $21,720
Experienced Annual Wage: $58,240

CERTIFICATIONS

Cosmetologist Licensure
S/P2 Cosmetology
Keratin Complex
Babe Hair Extensions
Pennsylvania Skills Certification (NOCTI)

RELATED COURSES

- Entrepreneurship & Small Business Development
- Child Development & Early Learning





HEALTH & HUMAN SERVICES

CULINARY ARTS

The Culinary Arts program begins in 9th and 10th grades, focusing on foundational skills such as knife techniques, breakfast cookery, sauces, stocks, rice, pasta, and front-of-house service. In 11th grade, students advance to moist, dry, and combination cooking methods, learning chicken butchery, sausage and pasta making, meat and fish prep, fruit and vegetable work, cold food prep, cheesemaking, and food safety. They apply these skills through our take-out and restaurant program. In 12th grade, students focus on front- and back-of-house operations, covering food costing, portion control, nutrition, menu planning, and management techniques. They gain real-world experience running a student-operated restaurant. Graduates are well-prepared for careers in food service, hospitality, tourism, or institutional settings, or may choose to continue their education in culinary studies.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Food Industry
Sanitation & Safety
Purchasing, Receiving, & Storage
Food Preparations
Knife Skills & Cooking Techniques
Food Service Tools & Equipment
Standardized Recipes & Measurements
Nutrition
Fruits & Vegetables
Pasta, Grains, Legumes, & Potatoes
Stocks, Soups, & Sauces
Meat, Poultry, & Seafood
Baking & Pastry Skills
Food Service Management

CAREER PATHWAYS

Line Cook
Prep Cook
Catering Assistant
Sous Chef
Catering Manager
Food and Beverage Supervisor
Executive Chef
Restaurant Owner
Hospitality Director

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College
Delaware Valley University
The Restaurant School at Walnut Hill College

WAGES FOR RELATED OCCUPATIONS (2025)

SUPERVISORS OF FOOD PREPARATION & SERVING WORKERS
Entry-Level Annual Wage: $34,580
Experienced Annual Wage: $60,780

COOKS, RESTAURANT
Entry-Level Annual Wage: $23,910
Experienced Annual Wage: $36,010

COMBINED FOOD PREPARATION & SERVING WORKERS
Entry-Level Annual Wage: $22,190
Experienced Annual Wage: $36,880

CERTIFICATIONS

ServSafe
- Food Handler
- Manager

Bucks County Food Service Manager Certification
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Baking & Pastry Arts
- Entrepreneurship & Small Business Development





HEALTH & HUMAN SERVICES

DENTAL HEALTH

Students enrolled in the Dental Health Careers program receive a solid foundation in the sciences and professional skills essential to the dental field. Coursework includes basic anatomy, physiology, pharmacology, bacteriology, and both medical and dental terminology. In classroom and laboratory settings, students learn X-ray techniques, sterilization methods, infection control, and chairside assisting for a variety of dental procedures. Training also covers front-office operations such as maintaining dental records, processing insurance claims, and scheduling appointments. The program introduces students to the range of dental specialties and career pathways available. Many graduates choose to continue their education in college, pursuing majors such as Dental Hygiene, Expanded Function Dental Assisting (EFDA), and Pre-Dentistry, well-prepared for advanced study and future success in the dental profession.

PROGRAM CONCENTRATIONS

Occupational Safety
Dental Assisting
Principles of Infection Control
Ethical/Legal Responsibilities
Anatomy & Physiology
Pharmacology
Radiology Skills
Operative Dentistry (Chair Side Dentistry)
Dental Laboratory Procedures
Oral Surgery
Periodontics
Prosthodontics
Endodontics
Orthodontics

CAREER PATHWAYS

Dental Assistant
Sterilization Assistant
Oral Healthcare Coordinator
Dental Laboratory Technician
Orthodontic Assistant
Expanded Function Dental Assistant (EFDA)
Orthodontic Assistant
Dental Office Manager
Dental Hygienist
Dental Educator
Public Health Dental Specialist
Dentist
Forensic Dentist

COLLEGE CREDIT OPPORTUNITIES

Manor College

WAGES FOR RELATED OCCUPATIONS (2025)

DENTAL ASSISTANTS
Entry-Level Annual Wage: $38,690
Experienced Annual Wage: $55,440

CERTIFICATIONS

Basic Life Support CPR
HIPAA Certification
Radiation Health & Safety (RHS) Certification
DANB NELDA
DANB CDA
Mandated Reporter Certification
Bloodborne Pathogens Certification
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Allied Health
- Emergency Services



HEALTH & HUMAN SERVICES

EMERGENCY SERVICES

The Emergency Services Technology program equips students with the technical knowledge and practical skills needed to perform entry-level duties in careers such as police officer, firefighter, paramedic, and other public safety professions. The curriculum emphasizes the techniques, methods, and procedures used in criminal justice, fire protection, and emergency response, with special focus on disaster management and crisis situations. In addition to developing physical fitness and self-confidence, students receive training in social and psychological skills, map reading, vehicle and equipment operations, and the functions of the judicial system. Instruction also covers pre-hospital emergency medical care, including patient assessment, treatment, and communication protocols. Through hands-on exercises and real-world scenarios, graduates are well-prepared to enter the workforce or pursue advanced training in public safety and emergency services.

PROGRAM CONCENTRATIONS

Occupational Safety
Criminal Justice System
Law Enforcement
Private Security Management
Corrections – Adult & Juvenile Systems
Homeland Security
Communications
Incident Command System
Patrol Duties
Firefighting
Emergency Medical Services (EMS)
Hazardous Materials Awareness

CAREER PATHWAYS

Security Officer
Emergency Dispatcher
Correctional Officer
Police Officer
Private Investigator
Crime Scene Technician
Criminal Investigator (Detective)
Forensic Analyst
Criminal Justice Professor

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College
Pennsylvania College of Technology

WAGES FOR RELATED OCCUPATIONS (2025)

EMERGENCY MEDICAL TECHNICIANS & PARAMEDICS
Entry-Level Annual Wage: $33,981
Experienced Annual Wage: $47,366

FIREFIGHTERS
Entry-Level Annual Wage: $27,790
Experienced Annual Wage: $77,640

POLICE & SHERIFF'S PATROL OFFICERS
Entry-Level Annual Wage: $48,290
Experienced Annual Wage: $85,540

CERTIFICATIONS

American Heart Association Basic Life Support
CPR/AED Certification
HIPAA Certification
Hazardous Materials First Responder Awareness
NIMS IS 100, 200, 700, 800
Emergency Medical Technician (EMT) Certifications
Oleoresin Capsicum Aerosol Training (OCAT)
Practical & Tactical Handcuffing (PATH)
Personal Protection Baton Tactics (PPBT)
Management of Aggressive Behavior (MOAB)
12- Lead ECG Training Certificate of Completion
Bloodborne Pathogens Certification
Pennsylvania Skills Certification (NOCTI)
OSHA Certifications

RELATED COURSES

- Allied Health
- Dental Health

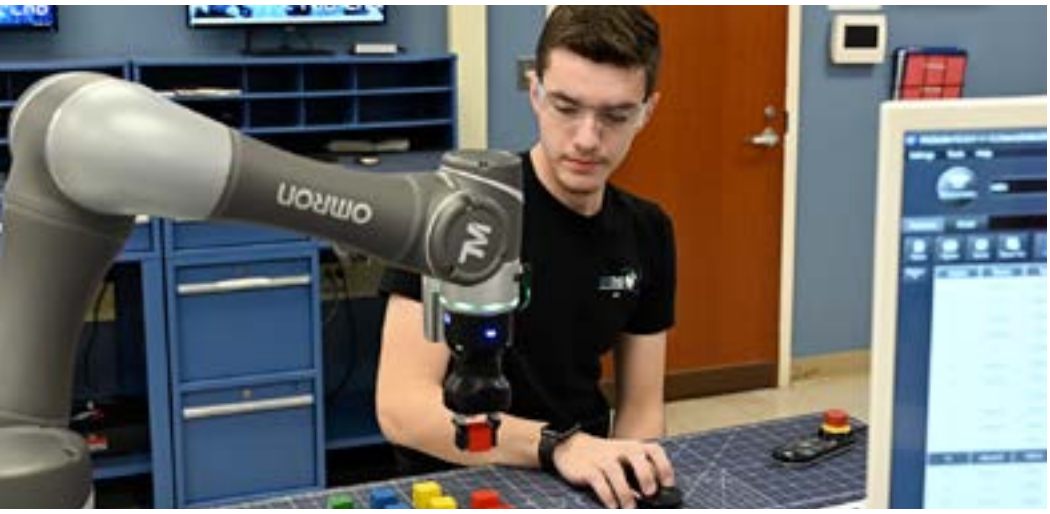
BCTHS



ENGINEERING & INDUSTRIAL TECHNOLOGY: MANUFACTURING











EIT: MANUFACTURING

ELECTRONICS/GREEN ENERGY TECHNOLOGY

The Electronics/Green Energy program emphasizes the theory, practice, and application of engineering principles and technical skills in electronics, communications, and renewable energy. Students build knowledge through a balanced mix of classroom learning and practical, hands-on training, gaining insight not only into how systems function but also why they work. This approach strengthens critical thinking, analytical reasoning, and problem-solving abilities. With exposure to advanced concepts and real-world applications, students develop a versatile foundation that can be applied across multiple industries. Whether their goal is to enter the workforce directly or to pursue higher education in engineering, this program provides essential preparation for a successful future.

PROGRAM CONCENTRATIONS

Introduction & Basics
Circuit Fundamentals & DC Electricity
AC & Reactive Components
Semiconductors & Analog
Digital, Systems, & Energy

CAREER PATHWAYS

Electronics Technician
Fiber Optic Technician
Solar Panel Installer
Electronics Engineering Technician
Communications Engineering Technician
Renewable Energy Technician
Electrical Engineer
Electronics Engineer
Aerospace Engineer
Renewable Energy Engineer

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

ELECTRICAL & ELECTRONIC ENGINEERING TECHS
Entry-Level Annual Wage: $47,280
Experienced Annual Wage: $61,520

SOLAR ENERGY SYSTEMS ENGINEERS
Entry-Level Annual Wage: $64,540
Experienced Annual Wage: $104,640

ELECTRO-MECHANICAL & MECHATRONICS TECHNOLOGISTS & TECHNICIANS
Entry-Level Annual Wage: $49,390
Experienced Annual Wage: $72,170

CERTIFICATIONS

Certified Electronics Technician Associate (CETa)
Student Electronics Technician (SET)
SEI International
- Renewable Energy
- Fundamental Math for Solar Applications

Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Machine Technology
- Electrical Occupations Technology
- Civil Engineering Technology



EIT: MANUFACTURING

MECHATRONICS TECHNOLOGY

Mechatronics Engineering Technologies introduces students to state-of-the-art technologies used in today's high-tech and automated manufacturing industries. The program focuses on integrated systems, preparing students for postsecondary education and a wide range of future occupations by providing essential career, business, and technical knowledge. Students aspiring to become engineers or technicians develop the skills necessary to excel in the high-performance manufacturing workplaces of the 21st century. Coursework and hands-on projects cover mechanical, electrical, and computer-controlled systems, fostering problem-solving and innovation. In addition, students gain valuable experience in design engineering, learning each stage of the design process from concept to prototype, and preparing for advanced study or immediate employment.

PROGRAM CONCENTRATIONS

Introduction to Electricity & Electronics
Wireless Communications
Computer/TV Displays
Electro-mechanical Systems/Manufacturing/ Automated Processes
Audio Systems
Alarms & Building Automation
Wired Communications/Telecommunications
Certifications
Employability Skills

CAREER PATHWAYS

Mechatronics Technician
Automation Technician
Industrial Maintenance Technician
Electromechanical Technician
Robotics Technician
Automation Specialist
Mechatronics Engineer
Robotics Engineer
Automation Systems Engineer

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

AVIONICS TECHNICIANS
Entry-Level Annual Wage: $46,570
Experienced Annual Wage: $107,370

ELECTRONIC EQUIPMENT INSTALLERS & REPAIRERS, MOTOR VEHICLES
Entry-Level Annual Wage: $26,860
Experienced Annual Wage: $57,550

ELECTRO-MECHANICAL & MECHATRONICS TECHNOLOGISTS & TECHNICIANS
Entry-Level Annual Wage: $44,210
Experienced Annual Wage: $104,690

CERTIFICATIONS

Certified Electronics Technician Associate (CETa)
Student Electronics Technician (SET)
CompTIA-TestOut
- PC Pro
- Net Pro
- Security Pro
- Ethical Hacking

SEI International
- Fundamental Math for Solar Applications

Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Machine Technology
- Electrical Occupations Technology
- Civil Engineering Technology



EIT: MANUFACTURING

COMPUTER SYSTEMS & CYBERSECURITY

Computer Systems & Cybersecurity will prepare students to apply basic engineering principles and technical skills in support of professionals who use computer systems. This program includes instruction in basic computer design and architecture, programming, problems of specific computer applications, component and system maintenance and inspection procedures, hardware and software problem diagnosis and repair and reports preparation. Also, network and computer systems administrators are responsible for the day-to-day operation of an organization's computer networks. Students will learn how to organize, install, and support an organization's computer systems, including local area networks (LANs), extensive area networks (WANs), network segments, intranets, and other data communication systems.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Personal & Environmental Safety
Internet Applications
Computer Hardware
Troubleshooting, Repair & Maintenance
Operating Systems & Software
Networking
Security
Communication
Professionalism

CAREER PATHWAYS

Electronics Installer
Soldering Technician
Telecommunications Technician
Electrical Engineering Technician
Electronics Engineering Technician
Computer Hardware Engineer
Electrical Engineer
Electronics Engineer

COLLEGE CREDIT OPPORTUNITIES

Bucks County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

ELECTRONIC ENGINEERING TECHNICIANS
Entry-Level Annual Wage: $47,280
Experienced Annual Wage: $61,520

TELECOMMUNICATION INSTALLERS
Entry-Level Annual Wage: $44,910
Experienced Annual Wage: $63,650

CERTIFICATIONS

Certified Electronics Technician Associate (CETa)
A+ Certification
Microsoft Certified Professional (MCP) Network +
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Multimedia Digital Design & Programming
- Mechatronics Technology



EIT: MANUFACTURING

MACHINE TECHNOLOGY

Machine Technology students gain a strong foundation in practical mathematics, precision measurement, and blueprint reading, all essential for success in the machining field. After mastering the proper use and safe handling of basic machine trade hand tools, students progress to learning the setup and operation of band saws, drill presses, lathes, milling machines, and precision grinders. Instruction also covers heat-treating processes and the use of optical comparators for high-accuracy inspections. A significant emphasis is placed on computer numerical control (CNC) programming and operation, reflecting modern industry demands. Graduates are prepared to enter skilled apprenticeship programs, begin work in advanced manufacturing, or continue studies toward a degree in mechanical engineering or related fields.

PROGRAM CONCENTRATIONS

Performing Layout Work
Part Inspection
Bench Work
Drill Presses
Grinding Machines
Lathes
Milling Machines
Power Saw
Machines & Tools
Metallurgy
Charts and References
Blueprints Reading
CNC Programming/Operations

CAREER PATHWAYS

CNC Machine Operator
Manual Machinist
Tool & Die Maker
Assembly
CNC Programmer
Precision Machining Technician
Manufacturing Technician
Manufacturing Engineer
Mechanical Engineer
Industrial Engineer

COLLEGE CREDIT OPPORTUNITIES

Butler County Community College
Delaware County Community College
Johnson College
Luzerne County Community College
Reading Area Community College
Thaddeus Stevens College of Technology
Westmoreland County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

MANUFACTURING ENGINEERS
Entry-Level Annual Wage: $60,320
Experienced Annual Wage: $96,480

CNC TOOL OPERATORS
Entry-Level Annual Wage: $38,310
Experienced Annual Wage: $50,730

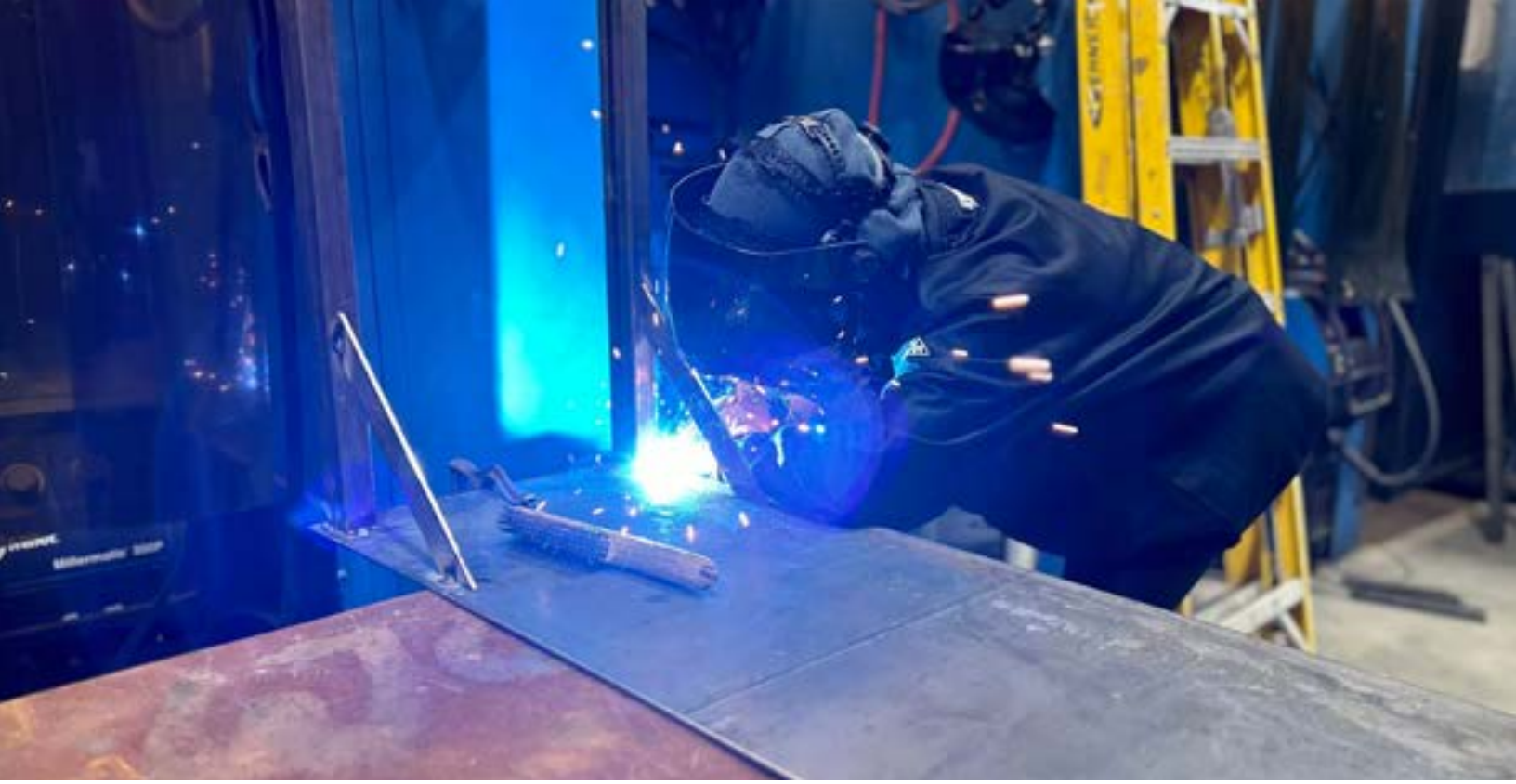
TOOL AND DIE MAKERS
Entry-Level Annual Wage: $45,640
Experienced Annual Wage: $62,600

CERTIFICATIONS

NIMS Machining Level 1
Autodesk Certification
Haas Mill and Lathe Operator Test
OSHA Certification

RELATED COURSES

- Weldimg & Fabrication Technology
- Mechatronics Technology
- Fine Woodworking
- Civil Engineering Technology



EIT: MANUFACTURING

WELDING & FABRICATION TECHNOLOGY

Students who choose Welding & Fabrication Technology will learn basic and advanced blueprint reading, fabrication, and ferrous and non-ferrous knowledge. Laboratory instruction includes shielded metal arc welding, oxyacetylene welding MIG and TIG techniques. Theoretical and practical studies cover mild and alloy steels, aluminum, titanium and other exotic metals. Students learn the basics of heat treating, and non-destructive testing and inspection. Instruction meets AWS standards. Graduates can enter apprenticeship programs or go on to degree studies in metallurgy or mechanical engineering.

This is a registered pre-apprenticeship program.
For more information on pre-apprenticeship programs, please see page 73

PROGRAM CONCENTRATIONS

Occupational Safety
Welding, Drawing, & Weld Symbol Interpretation
Visual Examination, Inspection, & Testing
Shielded Metal Arc Welding (SMAW)
Gas Metal Arc Welding (GMAW)
Flux Cored Arc Welding (FCAW)
Gas Tungsten Arc Welding (GTAW)
Manual Oxyfuel Gas Cutting (OFC)
Mechanized Oxyfuel Gas Cutting (OFC)
Manual Plasma Arc Cutting (PAC)
Manual Air Carbon Arc Cutting (CAC-A)

CAREER PATHWAYS

Welder/Fabricator
Pipe Welder
Structural Welder
Welding Inspector
Welding Technician
Robotic Welding Operator
Welding Engineer
Metallurgical Engineer
Manufacturing Engineer

COLLEGE CREDIT OPPORTUNITIES

Community College of Allegheny County
Delaware County Community College
Greater Altoona Career & Technology Center
Harrisburg Area Community College
Johnson College
Thaddeus Stevens College of Technology

WAGES FOR RELATED OCCUPATIONS (2025)

WELDERS
Entry-Level Annual Wage: $39,430
Experienced Annual Wage: $54,080

WELDING MACHINE SETTERS
Entry-Level Annual Wage: $31,030
Experienced Annual Wage: $38,210

SHEET METAL WORKERS
Entry-Level Annual Wage: $41,360
Experienced Annual Wage: $72,170

CERTIFICATIONS

Heartsaver AED, CPR & First Aid
Level I Entry Welder Certification
NCCER Credentials
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Machine Technology
- Diesel Technology



BCTHS



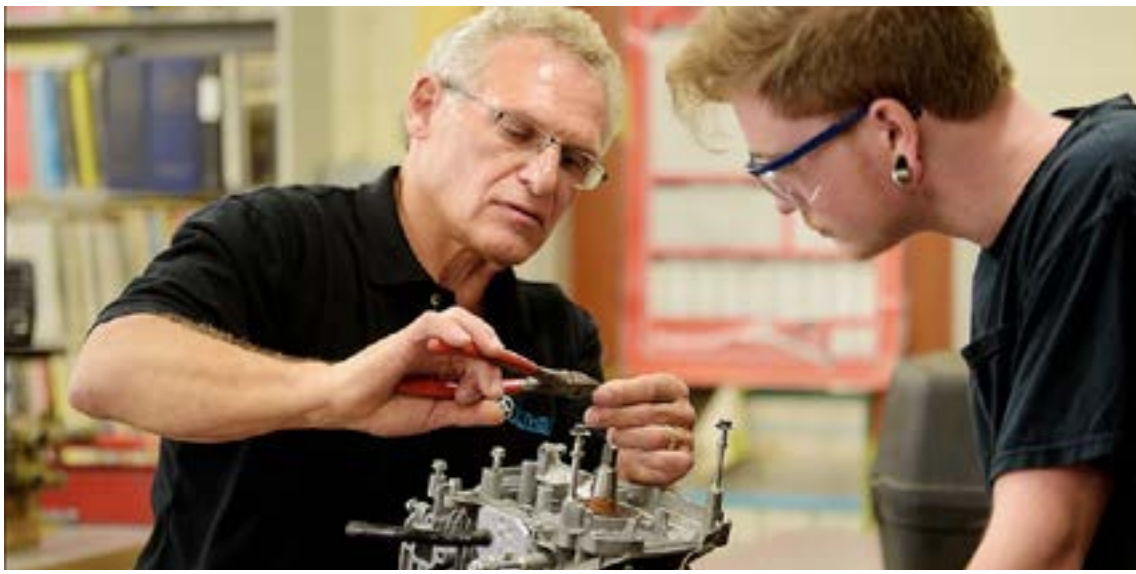
ENGINEERING & INDUSTRIAL TECHNOLOGY: TRANSPORTATION













EIT: TRANSPORTATION

AUTOMOTIVE TECHNOLOGY

Modern vehicles rely heavily on sophisticated computers and electronics to enhance safety, fuel efficiency, and driver comfort. As a result, today's automotive technicians must be proficient in both traditional mechanical repairs and advanced electrical systems. This program equips students with hands-on experience using digital multimeters, scan tools, lab scopes, and other industry-standard diagnostic equipment. Coursework includes OHM's law, voltage, current, battery testing, and servicing of starters and charging systems. Students also study lighting systems, gauges, and electrical accessories, along with 230 hours of engine performance training. Through extensive real-world practice, they gain expertise in diagnostics, computer controls, ignition systems, and fuel, air, and exhaust systems—preparing them for successful careers in modern automotive service and repair.

PROGRAM CONCENTRATIONS

Tools/Fasteners
Suspension, Brakes, & Steering
Electrical/Electronic Systems
Engine Performance & Repair
Automatic Transmission & Transaxle
Manual DriveTrain & Axles
Heating & Air Conditioning

CAREER PATHWAYS

Automotive Service Technician
Brake & Suspension Technician
Transmission Technician
Automotive Diagnostics Specialist
Fleet Maintenance Supervisor
Performance Tuning Specialist
Automotive Engineer
Mechanical Engineer (Automotive Focus)
Vehicle Systems Engineer

COLLEGE CREDIT OPPORTUNITIES

Allegany College of Maryland
Community College of Allegheny County
Community College of Philadelphia
Delaware County Community College
Harrisburg Area Community College
Johnson College
Lancaster County Career & Technology Center
Luzerne County Community College
Northampton County Area Community College
Rosedale Technical College.

WAGES FOR RELATED OCCUPATIONS (2025)

ELECTRONIC EQUIPMENT INSTALLERS & REPAIRERS, MOTOR VEHICLES
Entry-Level Annual Wage: $32,380
Experienced Annual Wage: $64,880

AUTOMOTIVE SERVICE TECHNICIANS & MECHANICS
Entry-Level Annual Wage: $48,150
Experienced Annual Wage: $82,850

CERTIFICATIONS

Heartsaver AED, CPR & First Aid
Automotive Service Excellence (ASE) Certification
AYES Certification
Certified Emissions Inspector
Certified Safety Inspector, Cat I
S/P2 Service Safety
S/P2 Pollution Prevention
Section 609 Certification for Refrigerant, Recycling & Recovery
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Collision Repair Technology
- Diesel Technology
- Welding & Fabrication Technology



EIT: TRANSPORTATION

COLLISION REPAIR TECHNOLOGY

The Collision Repair Technology program prepares students for entry-level careers in the collision repair industry through extensive hands-on training with state-of-the-art equipment and the most up-to-date industry techniques. Students build expertise in vehicle construction, disassembly and reassembly, and both non-structural and structural repairs. Training also covers surface preparation, refinishing, color matching, and accurate estimating practices. In addition, students gain experience in pre-delivery processes, including professional detailing, quality checks, and final inspection procedures. Emphasis is placed on restoring vehicles to their pre-accident condition while meeting the highest standards of craftsmanship, safety, and customer satisfaction. Graduates are prepared for work in repair shops, dealerships, and specialty restoration facilities.

PROGRAM CONCENTRATIONS

Vehicle Design & Construction
Panel Replacement & Alignment
Trim, Glass, & Hardware Installation
Metal Finishing & Body Fillers
Structural Repair, Straightening & Damage Analysis
Corrosion Protection
Welding & Cutting
Surface Preparation & Refinishing
Automotive Finishes & Equipment
Plastic Repair
Restraint Systems
Advanced Vehicle Technology
Detailing & Final Operations
Safety Procedures

CAREER PATHWAYS

Auto Body Repair Technician
Collision Estimator
Automotive Refinishing Technician
Collision Repair Supervisor
Auto Restoration Specialist
Insurance Damage Appraiser
Automotive Materials Engineer
Industrial Designer (Automotive Focus)
Vehicle Damage Assessor

COLLEGE CREDIT OPPORTUNITIES

Thaddeus Stevens College of Technology
Rosedale Technical College

WAGES FOR RELATED OCCUPATIONS (2025)

AUTOMOTIVE BODY & RELATED REPAIRERS
Entry-Level Annual Wage: $39,870
Experienced Annual Wage: $68,280

AUTOMOTIVE GLASS INSTALLERS & REPAIRERS
Entry-Level Annual Wage: $33,970
Experienced Annual Wage: $51,630

PAINTERS, TRANSPORTATION EQUIPMENT
Entry-Level Annual Wage: $43,080
Experienced Annual Wage: $78,390

CERTIFICATIONS

ICAR Academy Certificates of Achievement
S/P2 Collision Repair Safety
S/P2 Collision Repair Pollution Prevention
Section 609 Certification for Refrigerant, Recycling & Recovery
Pennsylvania Skills Certification (NOCTI)

RELATED COURSES

- Automotive Technology
- Welding & Fabrication Technology





EIT: TRANSPORTATION

DIESEL TECHNOLOGY

The Diesel Technology program provides students with a strong technical foundation by combining fundamental mathematics, physics, and study of the operating principles of the diesel cycle. Students gain familiarity with a wide range of industry tools, precision test instrumentation, and shop equipment essential to modern diesel service and repair. Instruction blends classroom learning with extensive hands-on laboratory experience, where students practice engine disassembly, inspection, and diagnosis using advanced testing technology. Training emphasizes troubleshooting, repair, overhaul, and fine-tuning of diesel engines, along with maintenance of cooling, fuel, and electrical systems. By mastering these skills, graduates are prepared for entry-level positions in the diesel and heavy equipment industries or to pursue further education toward a college degree in diesel engineering or related fields.

PROGRAM CONCENTRATIONS

Tools & Fasteners/Hardware
Suspension & Steering Systems
Preventive Maintenance
Brake System
Diesel Engines
Air Intake & Exhaust Systems
Cooling Systems
Fuel System
Electrical/Electronic System
Drive Line

CAREER PATHWAYS

Heavy Truck Technician
Commercial Vehicle Mechanic
Fleet Maintenance Technician
Diesel Fleet Manager
Commercial Vehicle Inspector
Heavy Equipment Service Supervisor
Fleet Operations Manager
Transportation Engineer
Logistics Engineer

COLLEGE CREDIT OPPORTUNITIES

Johnson College
Rosedale Technical College

WAGES FOR RELATED OCCUPATIONS (2025)

BUS & TRUCK MECHANICS
Entry-Level Annual Wage: $45,180
Experienced Annual Wage: $61,530

FARM EQUIPMENT MECHANICS
Entry-Level Annual Wage: $36,530
Experienced Annual Wage: $50,790

ENGINE & OTHER MACHINE ASSEMBLERS
Entry-Level Annual Wage: $40,000
Experienced Annual Wage: $50,760

CERTIFICATIONS

Automotive Service Excellence (ASE) Certification
Outdoor Power Equipment Technician Certification
Certified Safety Inspector, Cat I
Certified Safety Inspector, Cat III
Bendix Air Brake Certification
S/P2 Heavy-Duty/Diesel Technology
Section 609 Certification for Refrigerant, Recycling & Recovery
Pennsylvania Skills Certification (NOCTI)

RELATED COURSES

- Automotive Technology
- Outdoor Power Equipment
- Welding & Fabrication Technology



EIT: TRANSPORTATION

OUTDOOR POWER EQUIPMENT

Small Gas Engines is designed to provide students, hobbyists, and aspiring technicians with practical knowledge of small engine theory, construction, operation, lubrication, maintenance, troubleshooting, service, rebuilding, and repair. Through hands-on training and classroom instruction, students develop a thorough understanding of internal combustion engine components and how these parts work together to power lawn mowers, generators, snow blowers, and other outdoor equipment. This strong foundation is particularly valuable for those enrolled in the Outdoor Power Equipment (OPE) program, as it improves diagnostic and repair skills. Emphasizing real-world applications, the program prepares participants for entry-level careers, advanced training, or successful personal mechanical projects.

PROGRAM CONCENTRATIONS

Occupational Safety
Electrical Principles & Testing
Cooling, Fuel, & Exhaust Systems
Trade Math & Measuring
Hand & Power Tools
Fasteners
Welding, Heating & Cutting
2- & 4-Stroke Engines
Engine Failure Analysis
Starting, Ignition & Charging Systems
Lubrication & Governor Systems
Brake, Clutch & Drive Systems
Wheels & Chassis Service
Parts Management & Recordkeeping

CAREER PATHWAYS

Outdoor Power Equipment Technician
Small Engine Repair Technician
Motorcycle/ATV Repair Technician
Marine and Powersports Technician
Alternative Fuel & Electric Equipment Specialist
Equipment Service Manager
Outdoor Equipment Engineer
Recreational Vehicle Systems Engineer
Sustainable Power Equipment Engineer

COLLEGE CREDIT OPPORTUNITIES

Delaware County Community College

WAGES FOR RELATED OCCUPATIONS (2025)

MOTORCYCLE MECHANICS
Entry-Level Annual Wage: $26,530
Experienced Annual Wage: $44,560

RECREATIONAL VEHICLE TECHNICIANS
Entry-Level Annual Wage: $37,540
Experienced Annual Wage: $46,370

MOBILE HEAVY EQUIPMENT MECHANICS
Entry-Level Annual Wage: $46,300
Experienced Annual Wage: $62,180

CERTIFICATIONS

Heartsaver AED, CPR & First Aid
Outdoor Power Equipment Technician Certification
S/P2
EETC Basic
EETC Four-Stroke Engine
Pennsylvania Skills Certification (NOCTI)
OSHA Certification

RELATED COURSES

- Automotive Technology
- Diesel Technology
- Welding & Fabrication Technology

BCTHS

WHERE CAREERS BEGIN!



GENERAL INFORMATION

ACADEMICS AT BCTHS

At Bucks County Technical High School, academic coursework is designed to strengthen and support the technical training students receive in their chosen career program. Our mission is to prepare every student for career success, post-secondary education, and lifelong learning by integrating rigorous academics with hands-on technical skill development.

Students complete a full academic program—English, Mathematics, Science, and Social Studies—that meets graduation requirements while also aligning directly with the knowledge and skills needed in technical fields. For example, math concepts are applied to construction measurements, science supports healthcare and environmental studies, and language arts emphasizes technical writing and communication relevant to the workplace.

Academic teachers work in partnership with technical instructors to ensure learning is connected, relevant, and career-focused. Research papers, projects, and presentations are often tied to students' technical areas of study, reinforcing their understanding and deepening career preparation.

By combining high expectations in both academics and technical education, BCTHS graduates are prepared not only to succeed on industry certification exams and NOCTI assessments but also to transition smoothly into college programs, apprenticeships, and employment opportunities. Academics at BCTHS are not separate from technical training—they are an essential foundation that strengthens technical mastery and prepares students for future success.

ADMISSIONS

Students interested in attending BCTHS must complete an application, which is available at the school and on our website. The philosophy of BCTHS is that passing grades, attendance, punctuality, and appropriate behavior are important to employers and to enter post-secondary education successfully. As a result, the criteria for acceptance into the school will be determined by grades in Math, Science, English, and Social Studies, attendance, punctuality, and a student's discipline record.

*Please visit our website at **www.bcths.com** for more information on the admission process.*

ATTENDANCE

Attendance at BCTHS is considered preparation for employment. Employers expect workers to be present and on time every day. Therefore, students are expected to develop the same habits while in school. Regular attendance is directly related to academic success, mastery of technical skills, and employability. Just as excessive absenteeism or tardiness can lead to job termination, poor attendance at BCTHS can result in loss of privileges, impact grades, and jeopardize participation in cooperative education. Employers consistently rank attendance and punctuality as top employability skills, and BCTHS's attendance policies are designed to build these habits for workplace success.

UNIFORMS

Students are expected to dress appropriately for their technical program, following industry standards for safety and professionalism. Uniform requirements are outlined in each program syllabus. Uniforms and safety attire teach accountability, responsibility, and adherence to OSHA/industry regulations. These expectations directly mirror workplace requirements.

COMPETENCY-BASED INSTRUCTION

Students entering BCTHS will be oriented to the requirements for completing their program of study as outlined on an official task list. Each student will receive a copy of this task list along with learning guides that specify required skills, performance standards, and the assessments used to measure progress. Teachers will monitor and document student progress as competencies are achieved. Upon completion of all required competencies, students will receive a finalized task list as part of their permanent record. While progress is measured primarily through competency evaluations, factors such as attendance and attitude also play a critical role in overall success.

COOPERATIVE EDUCATION PROGRAM

Eligible students in 11th and 12th grade may participate in cooperative education, which combines classroom instruction with paid work experience aligned with their technical program. Participation requires satisfactory grades, attendance, and instructor recommendation. Cooperative Education places students in real-world jobs, giving them hands-on experience, industry references, and a pathway to long-term employment.

GRADING POLICY

Grades reflect academic performance, mastery of skills, attendance, and professionalism. Each technical program utilizes task-based grading, aligned with Pennsylvania Department of Education standards.

HIGH PRIORITY OCCUPATIONS

BCTHS programs are aligned with Pennsylvania High Priority Occupations, ensuring training is relevant to labor market demands and supports strong career pathways. Students graduate with skills directly tied to occupations that are in demand regionally and nationally, increasing employability and wage potential.

PARTICIPATING SCHOOL DISTRICTS

BCTHS serves students from:

BENSALEM TOWNSHIP, BRISTOL BOROUGH, BRISTOL TOWNSHIP, MORRISVILLE, NESHAMINY, & PENNSBURY

SCHOLARSHIPS

Various scholarships are available through local businesses, industry partners, and organizations. Information is provided by the BCTHS School Counseling Department. Scholarships promote advanced training, further education, and lifelong learning, which are essential for career advancement in rapidly evolving industries.

NOCTI / NIMS

Students enrolled in approved Career and Technical Education (CTE) programs are required to complete the NOCTI (National Occupational Competency Testing Institute) assessment, which includes both a written and a performance exam. Students who successfully pass both components earn recognition from the Pennsylvania Department of Education in the form of either a Pennsylvania Skills Certificate (for advanced-level performance) or a Pennsylvania Certificate of Competency (for competent-level performance). These credentials verify a student's mastery of industry standards and serve as valuable evidence of employability and career readiness.

The National Institute for Metalworking Skills (NIMS) offers nationally recognized certifications in machining, metalworking, and manufacturing. At BCTHS, NIMS credentials are available to students in the Machine Technology program, validating their technical competence and providing a competitive edge for employment or further training.

TECH PREP PROGRAMS

A Tech Prep Program in Pennsylvania is a planned sequence of study that begins in high school and continues at a partner college. It combines academic courses with technical training, allowing students who complete their CTE program and meet performance benchmarks to earn advanced standing or college credit through articulation agreements. Tech Prep ensures that students are prepared for both immediate employment and further education in high-demand career fields.

BCTHS offers the following tech prep programs:

COSMETOLOGY, DENTAL HEALTH, ENTREPRENEURSHIP & SMALL BUSINESS DEVELOPMENT, FINE WOODWORKING, MECHATRONICS TECHNOLOGY, & OUTDOOR POWER EQUIPMENT

SOAR
Students Occupationally and Academically Ready

CREDITS

SOAR (Students Occupationally and Academically Ready) is a Pennsylvania Department of Education program that prepares students for college and careers in high-demand industries. Through SOAR, students in approved CTE Programs of Study can earn free college credits at participating post-secondary institutions by achieving proficiency on their program task list and scoring competent or advanced on the NOCTI exam.

WHAT IS THIS CODE? *The SOAR website, CollegeTransfer.net, will display all college credits available to you, but lists all credits by CIP code.*

BCTHS SOAR PROGRAM LIST	CIP CODE
LANDSCAPING AND FLORAL DESIGN	1.0601
MULTIMEDIA DIGITAL DESIGN & PROGRAMMING	11.0801
BAKING & PASTRY ARTS	12.0501
CULINARY ARTS	12.0508
ELECTRONICS/GREEN ENERGY TECHNOLOGY	15.0303
COMPUTER SYSTEMS & CYBERSECURITY	15.1202
CIVIL ENGINEERING TECHNOLOGY	15.1301
CHILD DEVELOPMENT & EARLY LEARNING	19.0708
EMERGENCY SERVICES	43.9999
CARPENTRY	46.0201
ELECTRICAL OCCUPATIONS TECHNOLOGY	46.0399
PLUMBING & HEATING TECHNOLOGY	46.0503
HEATING, VENTILATION, AIR CONDITIONING & REFRIGERATION	47.0201
COLLISION REPAIR TECHNOLOGY	47.0603
AUTOMOTIVE TECHNOLOGY	47.0604
DIESEL TECHNOLOGY	47.0613
MACHINE TECHNOLOGY	48.0501
WELDING & FABRICATION TECHNOLOGY	48.0508
COMMERCIAL & ADVERTISING ART	50.0402
ALLIED HEALTH	51.9999

PRE-APPRENTICESHIPS

The Pre-Apprenticeship Program at BCTHS is designed to give students early access to industry-recognized training and career pathways. By combining classroom instruction with hands-on experience, students gain skills that align with industry standards and prepare them for entry into registered apprenticeship programs, employment, or further education. The program provides a direct pathway to family-sustaining careers by helping students build technical expertise, workplace readiness, and connections with local employers.

BENEFITS

- Designed to prepare students for entry to Registered Apprenticeship Programs or other opportunities after graduation.
- All participants will receive money to be used for tools, equipment, and industry certification testing fees.
- Upon completion, students may have the opportunity to move into the registered apprenticeship program with advanced standing.

PROGRAMS

Allied Health in partnership with District 1199C Training & Upgrading Fund (Nurse Aide & Patient Care Technician) and Drexel University (Medical Assisting)
Carpentry in partnership with Associated Builders and Contractors (ABC)
Child Development & Early Learning in partnership with District 1199C Training & Upgrading Fund
Computer Systems & Cybersecurity in partnership with Drexel University
Electrical Occupations Technology in partnership with Associated Builders and Contractors (ABC)
HVAC/R in partnership with Pennsylvania Heating & Cooling Contractors (PHCC)
Welding & Fabrication Technology in partnership with Philly Shipyard

BCTHS

APPLY TODAY

It is the policy of Bucks County Technical High School not to discriminate on the basis of race, sex, color, religion, age, gender, sexual orientation, national origin, handicap/disability, genetic information or any other legally protected classification in its admissions, educational programs, activities or employment policies as required by Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990 and the PA Human Relations Act. BCTHS provides equal access to the Boy Scouts and other designated youth groups. For information regarding services, activities, and facilities that are accessible to and usable by handicapped persons and in compliance with Title VI, Title IX, and Section 504, please contact the Human Resources Coordinator, 610 Wistar Road, Fairless Hills, PA 19030. (215) 949.1700 ext. 2807. Email: hr@bcths.com

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BUCKS COUNTY TECHNICAL HIGH SCHOOL
610 Wistar Road, Fairless Hills, PA 19030 · 215-949-1700

For more information please visit www.bcths.com

CLICK HERE TO APPLY!