Upper Bucks County Technical School

Program Course Guide

Where Students Prepare for College and Career

Featuring programs of study in the following

Advanced Manufacturing
Health Science

Agriculture
Hospitality & Tourism

Arts & Communications
Law & Public Safety

Construction
Transportation

Where Students Prepare for College and Career
About the Upper Bucks County Technical School

The Upper Bucks County Technical School (UBCTS) is jointly funded and operated by the Palisades, Pennridge, and Quakertown Community school districts and provides an avenue for these districts to provide quality, high-tech, and cost-effective training to its students in grades 9th through 12th. Every program has met the rigorous standards set forth by the Pennsylvania Department of Education to qualify as an approved career and technical education program. Each program offers students training in high priority occupations and prepares students for college and career readiness.

Frequently Asked Questions

What are Career and Technical Education (CTE) programs and how do they differ from courses offered at my high school?

Career and technical education (CTE) is a term used to describe approved courses that provide career training. These courses are taught by experts in the field and meet the rigorous accountability standards set forth by the Pennsylvania Department of Education. In addition, these programs are guided by regional employers, trade associations, apprenticeship programs, and credentialing agencies to ensure that instruction, equipment, safety processes, and curriculum all meet industry standards. High schools often offer exploratory courses that are taught by industrial arts or family and consumer science teachers. These courses are valuable foundational courses that provide students with exposure into career areas. Students who enjoy these courses should enroll into our programs to gain career preparation.

What are the benefits of receiving a career and technical education?

Students who achieve academic and technical proficiency are college and career ready. This means students have more options. Students may continue their education at a post-secondary institution, often receiving advanced standing through articulated credits. This means earning a degree for less money and in less time. Students may enter directly into the workforce and earn competitive wages. Students sometimes opt to do both; using their training to obtain good employment to help support themselves through college.

Must I pay tuition to attend the technical school?

All students who attend Palisades, Pennridge, or Quakertown Community school districts may attend free of charge. Students who are homeschooled or attend charter schools will need to speak with their district of residence to inquire about their enrollment policies. Students whose attendance is not sponsored by their resident district may apply directly to our school, but will have to pay the average cost per pupil in tuition.

May I participate in activities at my high school?

Not only can students still participate in all athletics and other extra-curricular activities, UBCTS also offers Career and Technical Student Organizations like SkillsUSA, HOSA, FFA, and NTHS.

Where Students Prepare for College and Career

Director’s Welcome
Animal Technology
Auto Collision Technology
Automotive Technology
Baking & Pastry Arts
Carpentry
Career Internship Program
Construction Technology
Cosmetology
Culinary Arts
Dental Careers
Diesel Equipment Technology
Electrical Technology
Graphic Communications
Health Care Careers
Landscape Construction & Plant Technology
Law Enforcement/Police Science
Machining Technologies
Mechatronics
Plumbing Technology
Small Engine Technology
Welding & Fabrication Technology
Welcome from the Executive Director

Did you know thousands of Bucks Countians started their careers by enrolling in Career and Technical Education? I should know - I’m one of those people! My technical education prepared me for 28 productive and profitable years in the Building Trades. Just like me, you can jumpstart your career and get a superior technical education – right here at the Upper Bucks County Technical School (UBCTS). If construction is not for you, look through our program guide and consider the many other career choices we offer. If you are a high school student at Palisades, Pennridge, or Quakertown High Schools, then you are eligible for a tuition-free career and technical education at the Upper Bucks County Technical School!*

Are you considering UBCTS but heard that going to Tech School means saying no to college? Then consider this - finishing our programs means earning automatic college credits thanks to Pennsylvania’s statewide articulation agreements! Be sure to check out each program’s College and other Post-Secondary Educational Opportunities.

In addition, our programs have been linked to High Priority Occupations, based on Pennsylvania’s Center for Workforce Information & Analysis – simply stated, it means our programs prepare students for jobs that are in high demand and pay family sustaining wages. There are more opportunities now in Career and Technical Education (CTE) than ever before. UBCTS opens doors, it does not close them!

Picking up this book means UBCTS is already a part of your life. Page through it and see what we have to offer. Ask questions, research careers in which you think you could be happy and successful. Your life and your career are adventures waiting to begin. Get started now by saying YES to success, YES to your future, and YES to the Upper Bucks County Technical School!

Best of luck as you prepare for your future,

Bernard J. Wagenseller,
Executive Director

* Optional certification in some programs cost extra.
ANIMAL TECHNOLOGY

Desire to Help + Love of Animals + Hard Work & Dedication = Veterinary Assistant

UNITS OF STUDY
Orientation & Safety
Office & Hospital Procedures
Communication & Client Relations
Pharmacy & Pharmacology
Examination Room Procedures
Animal Nursing
Surgical Preparation & Assisting
Laboratory Procedures
Radiology & Ultrasound Imaging
Animal Anatomy & Physiology

CERTIFICATIONS
CareerSafe OSHA
Pet First Aid and CPR
Youth Pork Quality Assurance
NAVTA Vet Assisting *Coming Soon

COLLEGE ARTICULATION
Bucks County Community College
Harcum College

PROGRAM COSTS
Uniform: $27-$32
Safety Boots: $35

EXPERIENCE
Develop veterinary clinical skills such as assessing animal health and administering medications.
Raise a variety of animals, including sheep, pigs, chinchillas, snakes, and ferrets.
Work in a team with other students to manage a daycare for dogs in our licensed kennels.

CAREER OPPORTUNITIES
Animal Technician
Animal Care Provider
Kennel Technician
Veterinary Assistant
Animal Lab Technician
Grooming Assistant
Zookeeper Assistant
Wildlife Conservation Officer

Industry Salary Ranges (Bureau of Labor Statistics):

Nonfarm Animal Caretaker: $17,550 — $35,860
Veterinary Assistants: $18,060 — $36,690
Veterinary Technicians: $21,890 — $47,410

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
AUTOMOTIVE COLLISION TECHNOLOGY

Artistic + Love of Cars + Hard Work & Dedication = Refinishing Technician

UNITS OF STUDY
- Safety
- Vehicle Design & Construction
- Panel, Glass, Trim, & Restraint
- Metal Finishing & Corrosion Protection
- Structural Component Repair & Damage Analysis
- Welding & Cutting
- Surface Preparation & Refinishing
- Automotive Finishes
- Blending Operations
- Detailing
- Plastic Repair

CERTIFICATIONS
- PA State Inspection
- SP2: Safety Pollution Prevention
- Automotive Service Excellence (ASE)
- OSHA CareerSafe

COLLEGE ARTICULATION
- Bucks County Community College
- Lehigh Carbon Community College
- Northampton Community College
- PA College of Technology
- Thaddeus Stevens College of Technology

PROGRAM COSTS
- Uniform: $40
- Respirator: $50
- Safety Boots: $35
- Safety Inspection Cert: $25

EXPERIENCE
- Design and produce custom paint work.
- Interact with customers to assess accident damage and perform structural and paint repairs.
- Use state-of-the-art technologies in a nationally certified Automotive Service Excellence program.

CAREER OPPORTUNITIES
- Insurance Adjuster
- Metal Working Technician
- Refinishing Technician
- Shop Owner
- Shop Supervisor
- Parts Manager
- Body Shop Receptionist
- Paint Representative
- Equipment Sales Person
- Tow Truck Operator

Industry Salary Ranges (Bureau of Labor Statistics):
- Automotive Glass Installer: $20,390 — $50,080
- Painters, Transportation Equip: $25,790 — $68,600
- Automotive Body Repairer: $25,030 — $69,570

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
AUTOMOTIVE TECHNOLOGY

Hands-on Learner + Love of Cars + Hard Work & Dedication = Master Mechanic

UNITS OF STUDY
- Safety
- Tools/Fasteners
- Suspension and Steering
- Brakes
- Electrical/Electronic Systems
- Engine Performance
- Engine Repair
- Automatic Transmission/Transaxle
- Manual Drive Train and Axles
- Heating and Air Conditioning

EXPERIENCE
- Diagnose, service, and maintain vehicles.
- Earn certifications to perform PA state inspections.
- Use state-of-the-art technologies in a nationally certified Automotive Service Excellence program.

CERTIFICATIONS
- PA State Inspection
- PA State Emission Inspection
- SP2: Safety Pollution Prevention
- Automotive Service Excellence (ASE)
- Automotive Youth Educational Systems (AYES)

COLLEGE ARTICULATION
- Bucks County Community College
- Lehigh Carbon Community College
- Northampton Community College
- PA College of Technology
- Thaddeus Stevens College of Technology
- University of Northwestern Ohio

PROGRAM COSTS
- Uniform: $40
- Safety Boots: $35
- Certifications: $75

CAREER OPPORTUNITIES
- Service Manager
- Service Technician
- Automobile Inspector
- Tire Installer/Service Person
- Alignment Technician
- Automobile Master Mechanic

Industry Salary Ranges (Bureau of Labor Statistics):
- Lube Tech: $24,972 *Locally Sourced Data
- Service Technician: $21,470 — $64,070
- Team Leader Technician: $38,450 — $100,480

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
Artistic Design + Love of Food + Attention to Detail = Pastry Chef

**UNITS OF STUDY**
- Hospitality & Baking Industry
- Sanitation and Safety
- Business Math
- Baking Preparation
- Baking Fundamentals
- Purchasing, Receiving, Inventory & Storage
- Nutrition
- Baking Planning
- Human Relations

**CERTIFICATIONS**
- ServSafe Foodhandler
- ServSafe Manager

**COLLEGE ARTICULATION**
- Bucks County Community College
- Montgomery County Community College
- PA College of Technology

**PROGRAM COSTS**
- Uniform: $80
- Skid Resistant Shoes: $35
- Certifications: $40

**EXPERIENCE**
- Work with professional chefs to create mouth-watering desserts.
- Express individual creativity through baking.
- Operate the Rise on Ridge Bakery at UBCTS.

**CAREER OPPORTUNITIES**
- Baker
- Baker’s Helper
- Cake Designer/Artist
- Caterer
- Pastry Chef
- Pastry Cook
- Owner/Operator Baking & Pastry Business

**Industry Salary Ranges (Bureau of Labor Statistics):**
- Baker: $18,140 — $38,400
- Pastry Chef: $23,150 — $74,170
- Food Service Manager: $28,780 — $83,010

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
CAREER INTERNSHIP PROGRAM (CIP)

Want training in a program we don’t offer? Let us help you get paid, on the job training.

UNITS OF STUDY
Career Awareness
Career Preparation
Career Acquisition
Career Retention
Career Advancement
Entrepreneurship
*Customized learning based on career field and training agreement

CERTIFICATIONS
OSHA Safety Certification
OSHA Employability Certification

COLLEGE ARTICULATION
Bucks County Community College

PROGRAM COSTS
Students must provide their own transportation

PROGRAM DETAILS
• Students work between 15 and 40 hours per week.
• Students attend weekly CIP class at their sending school.
• Students are responsible for securing employment prior to entry into the program.
• Student’s work-based experience is supported through mentoring, an occupational training plan, and support from our School to Work Coordinator.

EXPERIENCE
Earn high school credit while gaining valuable work experience.
Jumpstart your career through on the job training.
Develop career acquisition, retention, and advancement strategies.

CAREER OPPORTUNITIES
Some of our graduates have worked in the following careers:

Retail Salesperson
Administrative Assistant
Teacher Assistant
Warehouse Assistant

Industry Salary Ranges (Bureau of Labor Statistics):

• Teacher Assistant: $18,120 — $38,820
• Retail Salesperson: $17,810 — $41,420
• Administrative Assistant: $21,470 — $53,060

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
Desire to Create + Detail Oriented + Problem Solving Skills = Carpenter

EXPERIENCE
Build structures that will stand the test of time.
Utilize hand and power tools such as a builder’s transit, pneumatic nail and trim guns.
Read blueprints, survey, frame, and finish from foundation to roof.

CAREER OPPORTUNITIES
Builder
Rough Framer
Finish Carpenter
Master Carpenter
Roofing & Siding Installer
Drywall Installer/Finisher
Project/Construction Manager
Building Inspector
Independent Contractor

UNITS OF STUDY
Safety/Occupational Orientation
Hand Tools
Power Tools
Blueprint Reading
Site Preparation & Layout
Footing & Foundations
Framing—Floor Construction
Framing—Wall Construction
Framing—Roof Construction
Exterior Finish
Interior Finish
Estimation

CERTIFICATIONS
OSHA CareerSafe
Pennsylvania Builder’s Association Skills Certificate
Ladder Safety

COLLEGE ARTICULATION
Bucks County Community College
Clarion University of Pennsylvania
Delaware County Community College
PA College of Technology
Thaddeus Stevens College of Technology

PROGRAM COSTS
Uniform: $10
Work boots: $20-$60
Certifications: $25

Industry Salary Ranges (Bureau of Labor Statistics):

- Carpenter’s Helper: $19,690 — $43,030
- Drywall & Ceiling Tile Installer: $26,830 — $79,660
- Carpenter: $27,070 — $79,480

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
CONSTRUCTION TECHNOLOGY

Desire to Create + Detail Oriented + Problem Solving Skills = Contractor

UNITS OF STUDY
Safety
Hand Tools
Power Tools & Equipment
Blueprint Reading
Site & Building Layout
Placing Concrete
Block Laying & Masonry
Framing—Floors
Framing—Wall Construction
Framing—Roof Construction
Roof Covering
Insulation
Exterior Finishes
Plumbing
Electric Circuits and Components
Interior Finishes
Stairways

CERTIFICATIONS
OSHA CareerSafe
Pennsylvania Builder’s Association Skills Certificate

COLLEGE ARTICULATION
Bucks County Community College

PROGRAM COSTS
Uniform: $10
Work boots: $20-$60
Certifications: $25

EXPERIENCE
Cross train in a variety of construction areas including: carpentry, electrical, masonry, and plumbing.
Learn how to remodel your own home.
Use state-of-the-art power tools and construction equipment.

CAREER OPPORTUNITIES
General Contractor
Construction Manager
Construction Supervisor
Carpenter
Electrician
Mason
Plumber
Project Manager
Painter/Decorator
Building Maintenance Supervisor

Industry Salary Ranges (Bureau of Labor Statistics):

- Carpenter: $27,070 — $79,480
- Plumber: $29,680 — $89,720
- Construction Manager: $53,740-$158,330

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
COSMETOLOGY

Eye for Fashion Trends + Friendly Personality + Hands on Learner = Cosmetologist

UNITS OF STUDY
Safety/Decontamination & Infection Control
Hair Care/Hair Styling
Shampooing & Conditioning
Salon Management
Manicures and Pedicures
Hair Cutting/Shaping
Hair Texturizing, Curling, & Straightening
Hair Color
Skin Care/Makeup/Hair Removal
Hairpieces/Extensions
Facial & Spa Treatments

CERTIFICATIONS
OSHA CareerSafe
Cosmetology License
Esthetician License
Nail Technician License

COLLEGE ARTICULATION
Bucks County Community College

PROGRAM COSTS
Uniform: $50
Footwear: $20 - $60
Cosmetology Kit: $425
Certifications: $150

EXPERIENCE
Perform hair, skin, and nail services on clients in our on-site salon.
Show our style by competing against other students in makeup, hair, and nail art competitions.
Prepare for the PA State Board of Cosmetology Licensing Exam.

CAREER OPPORTUNITIES
Cosmetologist Platform Artist
Nail Technician Makeup Artist
Esthetician Competition Stylist
Salon Owner or Manager Trade Journal Writer

Industry Salary Ranges (Bureau of Labor Statistics):
- Nail Technician: $18,260 — $33,940
- Hairdresser: $17,620 — $47,410
- Skincare Specialist: $18,310 — $61,330

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
Reliability, Strong Work Ethic, Passion = Key Ingredients to Success in the Food Industry

UNITS OF STUDY
- Safety/Sanitation
- Careers in the Food Industry
- Purchasing/Receiving
- Knife Skills
- Kitchen Equipment
- Recipe Development & Preparation
- Nutrition
- Cheese Preparation
- Salads, Fruits, & Salad Dressings
- Herbs & Spices
- Stocks, Soups, & Sauces
- Meat, Poultry, & Seafood Prep
- Baking & Pastry Skills
- Menu Planning & Costing
- Kitchen Brigade
- Front-of-the-House

CERTIFICATIONS
- OSHA CareerSafe
- ServSafe Food Handler
- ServSafe Manager

COLLEGE ARTICULATION
- Bucks County Community College
- Montgomery County Community College

PROGRAM COSTS
- Uniform: $75
- Certifications: $40

EXPERIENCE
Join our restaurant team to operate the Rockridge Restaurant at Upper Bucks.
Prepare specialty foods and baked goods in our new, state-of-the-art commercial kitchen.
Hands-on experience through catering events, onsite restaurant operation and cooperative education placement.

CAREER OPPORTUNITIES
- Cook
- Prep Cook
- Caterer
- Head Chef
- Restaurant Manager
- Server
- Food & Beverage Manager

Industry Salary Ranges (Bureau of Labor Statistics):
- Prep Cook: $17,060—$30,010
- Chef: $23,150-$74,170
- Food Service Manager: $28,780—$83,010

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
DENTAL CAREERS

Creating healthy smiles through science and artistry.

UNITS OF STUDY
- Introduction to Dental Assisting
- Infection Control
- Safety & Emergency Procedures
- Ethical/Legal Responsibilities
- Anatomy & Physiology
- Office Procedures
- Pharmacology
- Radiology
- Chairside Dentistry
- Dental Materials
- Dental Laboratory Procedures
- Oral Surgery
- Periodontics
- Prosthodontics
- Endodontics
- Industry Certification Preparation

CERTIFICATIONS
- Radiology Certification
- Dental Assisting National Board (DANB) Certification
- (NELDA)
- CPR/AED
- OSHA Careersafe

COLLEGE ARTICULATION
- Bucks County Community College
- Harcum College
- Manor College

PROGRAM COSTS
- Uniform: $75
- Certifications: $250
- Workbooks: $50

EXPERIENCE
- Working chairside, assist a dentist with patients in our onsite dental clinic.
- Use artistic talents to craft dental prosthetics.
- Educate young children on the importance of dental hygiene.

CAREER OPPORTUNITIES
- Dental Assistant
- Dental Lab Technician
- Sterilizing Assistant
- Administrative Dental Assistant

Industry Salary Ranges (Bureau of Labor Statistics):
- Dental Assistant: $24,950 — $50,660
- Dental Laboratory Technician: $22,220 — $61,870
- Dental Hygienist: $50,140 — $98,440

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
DIESEL TECHNOLOGY

We fix the vehicles that move the world.

EXPERIENCE

Get the big rigs back on the road using computer based diagnostics and repair.

Perform mechanical repairs and maintenance on fleet vehicles, such as fire trucks, buses, and ambulances.

Use state-of-the-art technologies in our nationally certified ASE program.

CAREER OPPORTUNITIES

Diesel Technician
Truck Technician
Service Manager
Construction Equipment Technician
Parts Manager

UNITS OF STUDY

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

CERTIFICATIONS

PA State Safety Inspection
PA State Emission Inspection
OSHA CareerSafe
Safety & Pollution Prevention
EPA Refrigerant
Automotive Service Excellence

COLLEGE ARTICULATION

Bucks County Community College
Johnson College

PROGRAM COSTS

Uniform: $35
Boots: $100 (steel tipped)
Certifications: $0 - 50

Industry Salary Ranges (Bureau of Labor Statistics):

- Farm Equipment Mechanic: $23,870-$56,470
- Bus & Truck Mechanic: $28,680-$66,940
- Mobile Heavy Equipment Mechanic: $32,160-$71,570

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
**Electrical Technology**

Desire to Create + Detail Oriented + Problem Solving Skills = Electrician

**Units of Study**
- Occupational Safety
- Hand Tools
- Power Tools
- Blueprint Reading
- Anchors & Supports
- Residential Cabling Technology
- Switches & Receptacles Circuits
- Fixtures
- Raceways
- Wired Devices
- Testing Equipment
- Electrical Service
- National Electrical Code
- Green Technology

**Certifications**
- OSHA CareerSafe
- Pennsylvania Builder’s Association Skills Certificate
- Ladder Safety

**College Articulation**
- Bucks County Community College

**Program Costs**
- Uniform: $10
- Work boots: $
- Certifications: $

**Experience**

Troubleshoot faulty wiring and perform repairs to the National Electrical Code standards.

Go green and learn about alternative, solar, and wind energy systems.

Prepare for employment in modern commercial settings with motor control and programmable logic controller (PLC) training.

**Career Opportunities**

- Electrician’s Helper/Apprentice
- Residential Electrician
- Commercial Electrician
- Industrial Electrician
- Electrical Assembler
- Maintenance Electrician

**Industry Salary Ranges (Bureau of Labor Statistics):**

- Electric Repairers: $24,780-$69,520
- Electrician: $31,410-$88,130
- Electrical Engineer: $59,240- $146,820

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
UNITs OF STUDY
Job Production Management
Art & Copy Preparation
Electronic Imaging
Image Acquisition & Manipulation
Platemaking
Press
Bindery

CERTIFICATIONS
OSHA CareerSafe
PrintED
Adobe

COLLEGE ARTICULATION
Bucks County Community College
Thaddeus Stevens College of Technology

PROGRAM COSTS
Uniform: $0
Certifications: $175

EXPERIENCE
Create custom displays and printed products in our on-site printing lab.
Develop a professional portfolio to present to prospective employers and colleges.
Design computer based graphics using Photoshop, InDesign, and Illustrator.

CAREER OPPORTUNITIES
Graphic Designer
Electronic Pre-Press Technician
Estimator
Offset Press Operator
Sales Manager
Production Manager
Bindery & Finishing Equipment Operator

Industry Salary Ranges (Bureau of Labor Statistics):
- Office Machine Operators: $19,340-$46,500
- Printing Press Operator: $20,460-$56,800
- Graphic Designer: $27,570-$81,320

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
HEALTH CARE CAREERS

Quality Care + Compassion + Knowledge = Health Care Careers

EXPERIENCE

Work on-site at partnering residential care settings and hospitals. Develop a professional portfolio to present to prospective employers and colleges.

Earn CPR, First Aid, Direct Care, and Nurse Aide Certifications

UNITS OF STUDY

Safety/Orientation
Professionalism/Legal Issues
Communication
Infection Control
Emergency Care & Disaster Preparedness
Human Needs & Development
Moving, Lifting, Positioning
Health Care Provider Skills
Nutrition & Hydration
Basic Anatomy & Physiology
Death & Dying
Medical Terminology
Medical Abbreviations
Professional Patient Skills

CERTIFICATIONS

AMCA—Medical Assisting
AMCA—Nursing Assisting
AMCA—Patient Care Technician
AHA First Aid & CPR
PA Nurse Aide Registry

COLLEGE ARTICULATION

Bucks County Community College
Harcum College
Mercyhurst University
Pennsylvania Institute of Technology

PROGRAM COSTS

Uniform: $20 — $100
Certifications: $79 — $102

CAREER OPPORTUNITIES

Nurse Aide
Patient Care Technician
Pharmacy Aide
Medical Secretary
Medical Assistant
Dietary Aide
Home Health Aide

Industry Salary Ranges (Bureau of Labor Statistics):

- Nursing Assistant: $19,390 — $36,890
- Licensed Practical Nurse (LPN): $32,510 — $60,420
- Registered Nurse (RN): $47,120 — $102,990

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
Landscaping

Artistic + Organized + Service Oriented = Landscaper

Experience

Grow edible and ornamental crops in our computer controlled greenhouse.

Design beautiful landscapes with plants, ponds, walkways, fountains, and more.

Prepare for a variety of career paths including: landscaping, hardscaping, greenhouse production, and floral design.

Career Opportunities

Arborist
Floral designer
Hardscape Installer
Landscape Architect
Landscape Contractor
Nursery/Greenhouse Grower

Industry Salary Ranges (Bureau of Labor Statistics):

- Laborers, Greenhouse & Nursery: $18,710 — $29,490
- Landscaping & Groundskeepers: $19,160 — $41,070
- Landscape Architect: $38,950 — $106,770

Units of Study

Occupational Safety
Plant Health Care Practices
Botany
Horticulture Business Operations
Soils and Climate
Sustainable Horticulture
Horticulture Technology
Horticulture as an Industry
Plant Identification

Certifications

OSHA CareerSafe
LS Training System Certification
Private Applicators Certification

College Articulation

Bucks County Community College
Pennsylvania College of Technology

Program Costs

Uniform: $18
Certifications: $0

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
Desire to Protect + Bravery + Commitment to Justice = Police Officer

EXPERIENCE

Investigate simulated crime scenes.
Participate in physical training on par with the State Police Academy.
Learn about the force continuum, weapon safety through a Fire Arms Training Simulator (FATS machine).

CAREER OPPORTUNITIES

Airport Security  Federal Agent
Corrections Officer  Military Officer
Dispatcher  Police Officer
Probation Officer

UNITS OF STUDY

Crime Scene Management
Health and Physical Training
Introduction to Criminal Justice
Correction and Juvenile Justice

CERTIFICATIONS

NRA Basic Pistol
Recognition & Identification of Hazardous Materials
Defensive Tactics
First Aid & CPR
Oleoresin Capsicum Aerosol Training
OSHA CareerSafe
Practical & Tactical Handcuffing Baton

COLLEGE ARTICULATION

Bucks County Community College
Harcum College
Manor College
Montgomery County Community College
Northampton County Community College

PROGRAM COSTS

Uniform: $110
Certifications: $0

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.

Industry Salary Ranges (Bureau of Labor Statistics):

- Security Guard: $18,350-$45,010
- Correctional Officers: $27,830-$73,060
- Police Officer: $33,430-$96,110
MACHINING TECHNOLOGIES

Design + Problem solve + Produce = Machinist

EXPERIENCE

Use high-tech computerized equipment to produce precision products used in all industries.

Make an engineer’s design a reality using Computer Numeric Control (CNC) equipment and CAD/CAM software.

Develop a sound foundation for a career in engineering or manufacturing.

CAREER OPPORTUNITIES

- Machinist
- Maintenance Machinist
- Tool & Die Makers
- Machine Operators
- Computer Numerical Control (CNC) Set-Up/Operators/Programmers
- Quality Control Inspectors

UNITS OF STUDY

Orientation/Safety
Performing Layout Work
Part Inspection
Bench Work
Drill Press
Grinding Machines
Lathes
Milling Machines
Machines, Tools, & Power Saw
Metallurgy
Charts, References, & Blueprints
CNC Programming

CERTIFICATIONS

NIMS Level 1:
- CNC Milling
- CNC Turning
- Manual Drill Press
- Manual Milling
- Manual Turning Between Centers
- Manual Turning with Chucking
- Measurement/Materials/Safety
OSHA CareerSafe

COLLEGE ARTICULATION

Bucks County Community College
Penn College of Technology
Thaddeus Stevens College of Technology

PROGRAM COSTS

Uniform: $40
Scientific Calculator: $15
Certifications: First Attempt Free

Industry Salary Ranges (Bureau of Labor Statistics):
*Local employers report higher wages

- Machinist: $25,230 — $61,290
- Tool & Die Maker: $32,010 — $73,530
- CNC Programmers: $32,330 — $75,780

Interested in business management, entrepreneurship, or leadership? Start earning your Associates Degree while in high school.
MECHATRONICS

Design + Problem solve + Analyze = Electromechanical Technician

UNITS OF STUDY
Technical Reports
Safety
Blueprints and Schematics
Basic Electricity
Electrical Systems
Electrical Resistance
Direct Current (DC) Motors
Induction and Capacitance
Alternating Current (AC) Motors
Series-Parallel Circuits
Electric Motor Controls
Soldering Techniques
Transformers
Electronics
Basic Logic Functions
Programmable Logistic Controls (PLCs)
Mechanical Power Transmission
Fluid Power Systems
Robotics

CERTIFICATIONS
AM/IST Level 1
OSHA CareerSafe

COLLEGE ARTICULATION
Bucks County Community College
Delaware County Community College
Harrisburg Area Community College

PROGRAM COSTS
Scientific Calculator: $15

EXPERIENCE
Design and build robotic devices.
Diagnose and repair sophisticated automated equipment.
Communicate using machine language

CAREER OPPORTUNITIES
Industrial Machinery Mechanic
Electro-mechanical Technician
Mechatronics Engineer

Electrical Engineer
Mechanical Engineer

Industry Salary Ranges (Bureau of Labor Statistics):
- Industrial Machinery Mechanic: $32,290 — $76,110
- Electro-Mechanical Technician: $34,820 — $85,440
- Mechanical Engineer: $54,420 — $131,350

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PLUMBING TECHNOLOGY

Mechanical + Service Oriented + Problem Solver = Plumber

EXPERIENCE

Use a torch to solder and braze copper tubing.
Install energy saving units for geothermal and solar heating.
Design and install residential and commercial fixtures, including: laundry, showers, spas, and steam rooms along with elements of HVAC.

CAREER OPPORTUNITIES

Maintenance/Repair Worker
Inspector
Plumber
Pipefitter
Steamfitter
Pipelayer

UNITS OF STUDY
Orientation/Safety
Blueprint/Schematics Reading
Pipe Specifications & Systems
Hand & Power Tools
Valve Installation
Pipe: Copper, Plastic, Steel, & Cast Iron
Hanger & Support Installation
Water Distribution Lines
Builder Leveler
Drains & Sewers
Install Fixtures
Install Appliances
Install Vents
Maintain Plumbing Systems
Perform Tests on Piping Systems
Advanced Pipe Fabrication
Pressure Boilers
Hydronic Heating Systems
Ladder/Scaffolding Safety

CERTIFICATIONS
Pennsylvania Builder’s Association Skills Certificate
OSHA CareerSafe

COLLEGE ARTICULATION
Bucks County Community College

PROGRAM COSTS
Uniform: $10
Certifications: $0

Industry Salary Ranges (Bureau of Labor Statistics):

- Maintenance/Repair Workers: $21,700-$60,060
- Plumber/Pipefitter/Steamfitter: $29,680-$89,720
- Construction/Building Inspector: $34,800-$91,600

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SMALL ENGINE TECHNOLOGY

Repair + Troubleshoot + Service = Small Engine Mechanic

EXPERIENCE

Diagnose and repair small and medium sized engines.  
Work with new and old technologies, from gasoline to electric.  
Work on motorcycles, snowmobiles, tractors, boat motors, and much more.

CAREER OPPORTUNITIES

Motorcycle Mechanic  |  Parts Person
Motorboat Mechanic  |  Customer Service Representative
Outdoor Power Equipment Mechanic  |  Tire Repairer/Changer

CERTIFICATIONS

OSHA CareerSafe
EETC 2 Stroke Certifications (4)
EETC 4 Stroke Certifications (4)

COLLEGE ARTICULATION

Bucks County Community College

PROGRAM COSTS

Uniform: $7
Work Boots: $20-$40
Certifications: $0

Industry Salary Ranges (Bureau of Labor Statistics):

- Outdoor Power Equip. Mechanic: $21,090-$50,740
- Motorcycle Mechanic: $21,770-$54,730
- Motorboat Mechanic: $22,820-$58,730

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WELDING TECHNOLOGY

Desire to Create + Detail Oriented + Problem Solving Skills = Welder

EXPERIENCE

Fabricate individual and team projects for real world applications.
Participate in state-of-the-art virtual reality weld training.
Melt, form, fuse, and cut metal to specifications.

CAREER OPPORTUNITIES

Ironworker
Welder
Metal Fabricator
Pipe Welder
Shipbuilder
Underwater Welder
Welding Supervisor

UNITS OF STUDY
Orientation/Safety
Principles of Welding
Blueprint/Schematic Reading
Shielded Metal Arc Welding
Gas Metal Arc Welding
Flux Cored Arc Welding
Gas Tungsten Arc Welding
Manual Oxyfuel Gas Cutting
Mechanized Oxyfuel Gas Cutting
Manual Plasma Arc Cutting
Manual Air Carbon Arc Cutting
Brazing & Soldering

CERTIFICATIONS
AWS, Various Codes
AWS– Level 1 Entry Welder
OSHA CareerSafe

COLLEGE ARTICULATION
Bucks County Community College
Northampton County Community College
Thaddeus Stevens College of Technology
Pennsylvania College of Technology

PROGRAM COSTS
Uniform: $100 — $200
(Helmet, work boots, gloves, and welding coat)
Certifications: approx. $120 each

Industry Salary Ranges (Bureau of Labor Statistics):

- Metal Fabricator: $24,620-$57,330
- Welder: $25,940-$60,000
- Ironworker: $29,770-$90,490

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SCHOOL EXCELLENCE THROUGH NATIONAL STANDARDS IN EDUCATION