

ELECTRICAL OCCUPATIONS

New Student Orientation Guide

CONGRATULATIONS

on your acceptance to the
Berks Career & Technology Center



BE IN DEMAND. BE SKILLED. BE HERE.

ELECTRICAL OCCUPATIONS

EAST and WEST CAMPUS

**Instructor: Michael DeCarlo
and Theodore Semanchick**

Have Questions?

Contact:
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East Campus
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West Campus
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SAFETY is our first priority at BCTC!

By ensuring that every student has the fundamental safety knowledge and skills required in the workplace, BCTC places safety as our first priority. Safety instruction and testing are documented and maintained as part of the student's instructional record

All career and technical teachers at BCTC implement a safety program within their particular program areas. As part of that safety program, every student enrolled in an approved career and technical education program at BCTC must complete an OSHA 10-hour General Industry or Construction Industry Safety Training during their first year in the program. To be eligible to return the following school year, all students must complete and pass this required safety training. These courses are web-based and can be completed online whenever and wherever internet service is provided.

Upon successful completion of the safety training program, students earn and receive an OSHA credential from the Federal OSHA Training Institute. These programs are designed to teach entry level workers how to stay safe in the workplace and begin to prepare them for a safe and prosperous future in their chosen career.

BCTC dress code is dictated by safety rules and industry standards which may include the use of hard hats, eye protection, respirators, ear protection, hair nets, safety shoes, and uniforms, depending on the requirements. Dress that is consistent with industry expectations is required as established under the provisions of Act 46 of 1998 which authorizes schools to adopt dress and uniform policies. (See Student Dress/Grooming Guidelines) Any deliberate act or behavior deemed unsafe that jeopardizes the safety and well-being of the individual or others may be cause for immediate suspension and dismissal from BCTC.

NATIONAL CENTER FOR CONSTRUCTION EDUCATION AND RESEARCH (NCCER)

The National Center for Construction Education and Research (NCCER) is a not-for-profit 501(c)(3) education foundation. NCCER was developed with the support of more than 125 construction CEOs and various association and academic leaders who united to revolutionize training for the construction industry. This progressive program has evolved into curricula for more than 70 craft areas and a complete series of more than 70 assessments offered in over 4,000 NCCER-accredited training and assessment locations across the United States. BCTC is a NCCER-accredited training and assessment school.

BCTC utilizes NCCER standardized construction and maintenance curriculum and assessments with portable credentials. BCTC students earn these portable credentials. The credentials are tracked through NCCER's registry which allows students, teachers, organizations, and companies to track the qualifications of craft professionals and/or check the qualifications of possible new hires. NCCER's registry also assists craft professionals by maintaining their records in a secure database.

NCCER's workforce development process of accreditation, instructor certification, standardized curriculum, registry, assessment, and certification is a key component in the industry's workforce development efforts. NCCER also drives multiple initiatives to enhance career development and recruitment efforts for the industry. BCTC's students benefit from this accreditation with training, nationally recognized curriculum, and certifications.

BCTC CONTINUING EDUCATION PROGRAM

NCCER's transcripts will be accepted and applied by BCTC's Continuing Education Program and will result in advanced placement in the Apprenticeship Programs.



STUDENT REGISTRATION AND RELEASE FORM Berks Career and Technology Center

Important: Type or print legibly. Any inaccuracies on this form may be reflected on transcripts & training records.

PRINT Name: _____

Birthdate: _____ and/or Social Security #: _____

Home Address: _____

City/Town: _____

State: _____ Zip: _____

HomePhone: _____

Cell Phone: _____

Your email: _____

Berks CTC campus: Oley Leesport

Construction trade you are studying: _____

Grade Level: Freshman (9) Sophomore (10) Junior (11) Senior (12) Adult

Name of BCTC teacher: _____

Your career goal: _____

How can Associated Builders & Contractors help you reach your career goal?

Please check all that apply:

_____ I would like to receive information that explains apprenticeship and how it can help me reach my career goals.*

_____ I would like to receive information from Associated Builders & Contractors, next spring, regarding contractors who are looking for entry level job applicants.*

_____ After high school, I am considering further training at a college or trade school (in some area of the construction trades) and would like to receive information regarding how to apply for a scholarship through the ABC scholarship program.*

*** Information will be mailed to your home address**

I hereby authorize the Berks CTC to send my training records to the ABC Keystone Chapter, to be forwarded to the NCCER Registry Department. I also authorize the NCCER Registry Department to verify information in my training records to Sponsor Representatives upon request. I release and hold harmless the Berks CTC, the ABC Keystone Chapter, and the National Center for Construction Education and Research for this verification process.

Signature: _____

Parent/Guardian Signature (if under 18 years old): _____

Reports containing trainee/participant information, including score sheets, training prescriptions, and transcripts, will not be distributed without properly documented release information from the trainee/participant.

Last:

First:

Electrical Occupations

Instructor **Michael DeCarlo** | East Campus | CIP Code **46.0399**
 Instructor **Theodore Semanchick** | West Campus



The Electrical Occupations program is accredited by the National Center for Construction Education and Research (NCCER) through the Associated Builders and Contractors (ABC) and provides participants with defined career paths in the electrical occupations industry. Through a combination of classroom, laboratory, and live work experiences students are well prepared for employment or have a strong foundation to pursue further education.

This comprehensive program provides students with the skills to become both construction and maintenance electricians. Construction electricians lay out, assemble, install, and test electrical fixtures and wiring used in electrical systems on construction sites. Maintenance electricians maintain and keep many different types of electrical equipment in good working order principally by detecting and repairing defective equipment before a breakdown occurs.

The curriculum covers many areas, including: residential wiring and service, wiring alterations, installation of electrical environmental circuits, commercial and industrial wiring, electrical maintenance, planning and site work on commercial/industrial jobs and services, power distribution transformers, single-phase transformers and AC machines, electrical motors and controls, three-phase transformers and AC machines, PLCs, electrical aspects of HVAC and related facilities, and emergency power systems. Instruction is also provided in the installation of electrical distribution systems both overhead and underground.

Students at the East Campus will have the opportunity to apply their skills and knowledge by helping with the construction of a custom built home under the direction of their instructors.

CAREER PATHWAYS:

- Electrician
- Commercial & Industrial Equipment Repairer
- Sales Engineer – Electrical Products

CAREER PATHWAYS CAN LEAD TO:*

- Electrical Engineer
- Electrical Contractor
- Maintenance Supervisor
- Superintendent (Construction)
- Electrician Technician - Plant
- Electrical Contractor- Residential

*Requires post-secondary training.

NCCER – National Center for Construction Education and Research

The Electrical Occupations program participates in NCCER. This curricula and training process is supported by trade associations, contractors, schools, construction and maintenance users, pipeline operators, manufacturers, and third-party training providers. Visit www.nccer.org for further information.

PBA – Pennsylvania Builder's Association

The Electrical Occupations program is a PBA endorsed program, which allows students who complete the program at the competent and above level to earn a PBA Certification. Visit www.pabuilders.org for more information.

Industry Certifications:

- NCCER Core
- OSHA/CareerSafe 10-Hour Certification
- Pennsylvania Builders Association Skills Certificate (based on NOCTI)

College Advanced Credits:

- Harrisburg Area Community College - Harrisburg Up to 8 credits
- Pennsylvania College of Technology Up to 2 credits
- Triangle Tech – Bethlehem Up to 8 credits

Program Requirements/Costs

There are specific costs for textbooks, tools, supplies, uniforms, certifications; and for some programs, medical and criminal clearances that students are obligated to pay upon acceptance. These costs change annually and are detailed on the BCTC website at www.BerksCareer.com/programs.

Program Entrance Recommendations:

- Reading at grade level
- Algebra I or Geometry
- Problem-solving/troubleshooting skills
- Ability to work independently and in a team
- Hand-eye coordination
- Mechanical Aptitude
- Ability to distinguish color





Berks Career & Technology Center
 Electrical Occupations
 Task Check Off List
 46.0399
 2020-2021

P = Program of Study	N = NOCTI	R = Restoration Tasks	Asterisk (*) = Local Tasks
Standard			
01.00 - ORIENTATION			
01.01* - Identify related electrical occupations - N			
01.02* - Demonstrate safety awareness - P			
01.03* - Define electrical trade terms, symbols and abbreviations			
01.04* - Identify/demonstrate use of common and specialty electrical hand and power tools - P, N			
01.06* - Identify/demonstrate use of basic electrical materials, anchors and supports as per NEC P, N			
01.07* - Perform first aid skills			
01.08* - Perform one person rescue CPR			
01.09* - Differentiate between dry cell and wet cell batteries			
01.11* - Identify purpose and demonstrate use of NEC book - P, N			
05.00 - RESIDENTIAL WIRING			
05.01* - Lay out, wire, install devices and finish basic residential receptacle circuits as per NEC - P, N			
05.02* - Lay out, wire, install devices and finish basic residential switching and lighting circuits as per NEC - P, N			
05.03* - Lay out, wire, install devices and finish basic residential combination circuits as per NEC - P, N			
05.04* - Lay out, wire, install devices and finish basic residential low-voltage circuits as per NEC - P, N			
05.05* - Wire and finish heat, smoke, security systems - P, N			
05.06* - Wire and connect voice, video, and data systems with various cables, including coaxial, as per NEC - P, N			
05.07* - Install and connect major residential appliances as per NEC - P, N			
05.08* - Install residential surface mounted lighting fixtures and recessed lighting fixtures as per NEC - P, N			
06.00 - RESIDENTIAL SERVICE			
06.01* - Calculate circuit loads (AC - DC theory, series - parallel circuits)			
06.02* - Interpret and prepare residential electrical print, including branch circuits and electrical details as per NEC and standard wiring practices - P, N			
06.03* - Select service, wire and materials for residential electrical installation as per NEC and standard wiring			
06.04* - Write specifications, prepare panel schedule and estimate electrical requirements of a residence as per NEC - P			
06.05* - Identify and install 100 amp and 200 amp overhead service, dressing and tying in service panel as per NEC - P, N			
06.06* - Construct temporary service as per NEC			
06.07* - Build underground electrical service as per NEC - P, N			
06.08* - Install and connect mobile home service as per NEC			
06.10* - Design and write specifications for Smart House wiring system			
07.00 - WIRING ALTERATIONS AND ADDITIONS TO EXISTING STRUCTURES			
07.03* - Install new receptacle, switch and lighting fixture in drywall/paneled wall as per NEC - N			
07.05* - Mount surface boxes and metal/nonmetal/wire mold raceway as per NEC - P, N			
07.07* - Add subpanel and safety switch to existing service as per NEC - N			
08.00* - INSTALL ELECTRICAL ENVIRONMENTAL CIRCUITS			
08.03* - Compute size for resistance heat unit for room and install with wall and unit thermostat as per NEC			
08.05* - Assemble and install ceiling fan with/without light units for air circulation and ventilation as per NEC - P, N			
08.07* - Identify electrical requirements for swimming pools, spas, fountains, hot tubs and other water			

sources
14.00 - COMMERCIAL AND INDUSTRIAL WIRING
14.01* - Demonstrate use of tools and procedures for cutting, bending, threading and installing rigid conduit as per NEC - P
14.02* - Demonstrate use of tools and procedures for cutting, bending, and installing EMT as per NEC - P, N
14.03* - Demonstrate use of tools and procedures for cutting, bending and installing PVC conduit as per NEC - P, N
14.04* - Demonstrate use of tools and procedures for cutting, bending and installing flexible conduit (metal clad cable) as per NEC - P, N
14.05* - Calculate lighting and branch circuit loads for commercial structure as per NEC
14.07* - Install special systems, including multi-outlet assembly using surface-mounted raceway and floor outlets as per NEC - P, N
14.09* - Lay out, wire, and finish commercial and industrial communication systems
14.10* - Diagram and install connections for photocell and timed controlled lighting - P, N
14.14* - Install explosion-proof and vandal-proof devices in hazardous locations as per NEC
14.16* - Calculate appropriate disconnecting means - P
15.00 - ELECTRICAL MAINTENANCE
15.02* - Inspect, troubleshoot and repair residential service
15.03* - Troubleshoot and repair low voltage systems
15.05* - Troubleshoot and repair residential branch circuit
15.06* - Diagnose and repair commercial and industrial lighting fixtures
15.07* - Repair and replace relays and timers
15.09* - Test overcurrent protection devices, fuses and circuit breakers to troubleshoot circuit
15.10* - Test and replace transformers
16.00 - PLANS AND SITE WORK ON COMMERCIAL AND INDUSTRIAL JOBS
16.01* - Lay out elevations for an open plot elevation
16.02* - Identify required permits, inspections, and the responsible organizations for a commercial structure
16.03* - Prepare materials list for commercial and industrial job from blueprint and specifications as per NEC
18.00 - POWER DISTRIBUTION TRANSFORMERS
18.01* - Wire and test power supply distribution transformer to supply 115 and 230 volts
18.02* - Wire and test various single phase transformers
19.00 - SINGLE PHASE TRANSFORMERS AND AC MACHINES
19.01* - Determine and measure single-phase transformer polarity, voltages and currents
20.00 - ELECTRICAL MOTOR AND CONTROLS
20.16* - Identify/interpret electrical symbols and diagrams
20.17* - Identify/interpret logic applied to line diagrams
20.18* - Identify/interpret solenoids, DC generators, and DC motors
20.19* - Identify/interpret AC generators, transformers and AC motors
20.20* - Identify/interpret/connect contactors and motor starters
20.21* - Identify/interpret/connect control devices
20.22* - Identify/interpret/connect reversing motor circuits
20.27* - Identify parts and operation of PLCs
23.00 - THREE PHASE TRANSFORMERS AND AC MACHINES
23.01* - Wire and analyze three-phase transformers
23.02* - Wire and analyze various three-phase motors
27.00 - EMERGENCY POWER SYSTEMS
27.01* - Identify and lay out various types of emergency power systems and where they are required as per NEC
28.00 - GREEN TECHNOLOGY
28.01* - Explain uses and operation of wind and solar power/solar cells - P, N
28.02* - Demonstrate installation procedures for wind energy source/wind turbine system - P
28.04* - Demonstrate installation procedures for photovoltaic system/solar energy source - P
90.00 - NCCER

90.01* - Basic safety - Identify causes of accidents and job site hazards - P, N
90.02* - Use personal protective equipment and lift properly - P
90.03* - Describe safe behavior on and around ladders and scaffolding - P, N
90.04* - Explain hazard communications and Safety Data Sheets
90.05* - Demonstrate fire and electrical safety - P, N
90.06* - Identify and use hand tools - P, N
90.07* - Identify/explain use of electric pneumatic, hydraulic and other power tools - N
90.09* - Identify types of blueprints - P, N
90.10* - Identify components of blueprints, including scale - P
90.12* - Identify lines of construction abbreviations, symbols, keynotes, grids and dimensions - P, N
90.14* - Calculate with whole numbers - N
90.15* - Simplify measurements - N
90.16* - Calculate with measurements - N
90.17* - Convert between fractions decimals and percents - N
90.18* - Apply construction geometry - N
90.20* - Explain materials handling
90.21* - Demonstrate basic communication skills
90.22* - Define employability skills
96.00 - HEALTH AND WELLNESS
96.01* - Participate in health and wellness activities - Level I
96.02* - Participate in health and wellness activities - Level II
96.03* - Participate in health and wellness activities - Level III
96.04* - 96.04* Self-care in the 21st Century
97.00 - CERTIFICATION
97.01* - Prepare to obtain NCCER core certification
97.02* - Obtain CareerSafe-OSHA Certification - P
97.03* - Prepare to obtain PA Builders Association Skills Certificate (based on NOCTI)
97.04* - Prepare to obtain Step Ladder Safety Training certification
97.05* - Prepare to obtain Extension Ladder Safety Training certification
97.06* - Prepare to obtain Articulated Ladder Safety Training certification
98.00 - STUDENT PROJECT/CAPSTONE
98.04* - Complete student capstone project
99.00 - CAREER EDUCATION AND WORK
99.01* - Explore your value system to determine how it affects your job performance
99.02* - Complete application forms
99.03* - Prepare a resume
99.04* - Write a cover letter
99.05* - Participate in a mock job interview
99.06* - Evaluate employer-employee relationships and analyze your own on-the-job attitudes
99.07* - Prepare your career portfolio
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PROGRAM OF STUDY (POS)

Program of Study (POS) is based on a straightforward idea: students, parents, educators, and employers work together to help students graduate prepared for high-paying, technical jobs, and further education. SOAR. (Students Occupationally and Academically Ready) as defined by the PA Department of Education, the POS educational plan articulates the high school-level career and technical programs to a post-secondary degree, diploma, or certificate program.

WHO participates?

Any Berks County high school student attending the Berks Career and Technology Center is part of the Program of Study. Students work in conjunction with their sending school counselor to develop the most appropriate rigorous academic schedule to foster preparedness for post-secondary education.

WHAT is a POS?

Berks County High Schools, the Berks Career and Technology Center, post-secondary institutions, and trade apprenticeships work together to develop a planned program of technical and academic courses for students to pursue careers in a technical field. Working with people from business and industry, secondary and post-secondary schools develop a seamless curriculum of courses, combining at least the final two years of secondary school with two years of post-secondary education, leading to an associate, two-year certificate, a trade apprenticeship or a bachelor's degree.

WHEN does a POS begin?

The POS begins at the high school and continues with the Berks Career and Technology Center in a technology cluster or an advanced technically-specific occupational program. In cooperation with the PA Department of Education, career and technical programs have an identified core of competencies to master called POS.

WHY a POS?

Advances in technology and increasing global competition mean a need for a better-skilled workforce with more technical knowledge. To fill high-skill positions, employers need employees that are both academically well rounded and technically proficient. POS grads are well-educated and career/college ready! POS benefits students, parents, schools, and employers. It is a win-win situation!

POS provides a smooth transition between secondary and post-secondary schools with no duplication of courses or credits loss. The SOAR program offers a tool to find post-secondary schools that recognize and accept BCTC's coursework as part of the state-wide articulation agreement and provide college credits that are earned before the student even begins at the college. Saving money and saving time are the reasons why students should strive to take advantage of POS!

ELECTRICAL OCCUPATIONS COURSE OUTLINE

First Year

- Covers basic DC theory including Ohms Law, series/parallel circuits, and principles of power
- Residential exercises including service calculations, circuit loading, and practical installation tasks
- Start basic conduit tasks in rigid conduit and electrical metallic tubing
- Work on the off-site student-built house

Second Year

- Complete conduit tasks in rigid conduit, electrical metallic tubing, PVC conduit, and flexible conduit
- Covers AC theory
- Work on the off-site student-built house
- Involvement in designated “Special Project”

Third Year

- Work a cooperative education job in the electrical field if course requirements are met and work is available
- Introduction to basic motor controls
- Involvement in designated “Special Projects”
- Work as a tutor/mentor to a first level student
- Work on the off-site student-built house
- Introduction to Green Technology
- Emergency Power Systems

ELECTRICAL OCCUPATIONS PROGRAM GUIDELINES

Uniform Requirements/Dress Code:

- All students must wear hard-sole leather work boots. No student will be allowed to work in the lab without work boots.
- All students will wear work uniforms consisting of blue jeans and program shirt. This is a policy that was established at the inception of the Berks Career & Technology Center. It allows the student to be easily identified when they are working outside of the Electrical Occupation's lab. It also protects the student's school clothes from being stained or soiled.
- The student will be provided with a new pair of approved safety glasses. These glasses are expected to last for the duration of time that the student is enrolled in the Electrical Occupation's program. The student will also be provided with a locker with a combination lock for securing the student's belongings while they are in lab.

Textbooks:

Students attending Berks Career and Technology Center are doing so because they have selected a program of study, based on their interests and aptitudes, to seek instruction that will lead to proficiency in a chosen career field. We are asking that students purchase their own textbooks and workbooks, knowing that these will lay the foundation for the start of their professional libraries.

The families of students, who find this to be a financial hardship, please feel free to speak with your child's instructor or the building administration. All conversations with either the instructor or the building administration will be kept in strictest confidence.

Tool Requirements:

Students are required to provide their own tools. Recommended tools include the following:

- 9" side cutting pliers (lineman's)
- Wire stripper
- Slotted-tip screwdriver
- 2 – Pump pliers/channel lock pliers
- Phillips-tip screwdriver
- Tape measure or folding foot rule
- Utility knife
- Torpedo level

For a list of required uniform(s), textbook(s), and tools/supplies, please see the on-line ordering instructions on the last page of this booklet.

LAB RULES, REGULATIONS, and POLICIES

1. All power and hand tools must be used following specific safety procedures for each tool that has been covered during Safety Orientation.
2. Safety glasses must be worn in lab area at all times.
3. Proper clothing must be worn in lab area at all times: work boots, work uniform.
4. All jewelry must be removed prior to entering the lab.
5. No horseplay; shoving, grabbing, pushing, pulling, fighting, etc.
6. No loud yelling, noises, or foul language.
7. Respect must be shown to others, their property, and the property of the school.
8. Provisions of the Student Handbook will be strictly enforced.

CAREER AND TECHNICAL STUDENT ORGANIZATIONS

BCTC offers students an array of co-curricular career and technical student organizations (CTSO's) in which students have the opportunity to develop leadership skills through community service projects, participation in skill competitions and engage in other planned career-related educational events. Therefore, all students are expected to join and actively participate in one or more of these national organizations.

The annual state and national dues for the student organizations vary by organization and are established on an annual basis by the state and national organization guidelines. BCTC chapter fundraising activities are partially utilized to provide an opportunity for students to join these organizations. Additional funding may be provided by BCTC in support of students who compete and represent BCTC and their career and technical program at competitions. The BCTC career and technical student organizations chapters have BCTC chapter advisors.



SkillsUSA is the largest of the six organizations. It emphasizes respect for the dignity of work, high standards and trade ethics, workmanship, scholarship, safety, and partnership with business. Students may participate in district, state and national competitions. All students are eligible to participate in SkillsUSA and/or one of the other career specific organizations.



HOSA (Health Science Education) is open to students enrolled in the Health-care and Protective Services program. Activities focus on training, developing skills, and serving others. The school's members enjoy a winning tradition of competing at annual state and national HOSA conferences.



FCCLA (Family, Career and Community Leaders of America) is open to students enrolled in Early Childhood Education, Culinary Arts, and Service Occupations programs. Emphasis is on promoting personal growth and leadership development through family and consumer science education, focusing on the multiple roles of family members, wage earners, and community leaders. Students participate in leadership training events, competitions, and state and national conferences.



FFA (Agricultural Education) is open to students enrolled in the Horticulture program. This co-curricular experience assists students by developing their potential for leadership, personal growth, and career success. Students participate in community service and competitions.



National Technical Honor Society is open to 11th and 12th grade students that meet certain requirements. NTHS encourages higher scholastic achievement, cultivates a desire for personal excellence, and helps top students find success in today's highly competitive workplace. NTHS is committed to the recognition of excellence in every arena of career and technical education – student achievement, community service, outstanding chapters, and contributions from business, industry, and educational professionals.



PBA (Pennsylvania Builders Association) is a student chapter affiliation of the Pennsylvania Builder's Association and the National Association of Home Builders (NAHB) and is open to students enrolled in the construction trades programs. The goal of this student organization is to promote a greater understanding of the construction trades, exposure to innovative products and processes, industry field trips, guest speakers, leadership, competition to showcase skill development and service.

Textbooks, Uniforms, Tools and Supplies

Students attending Berks Career and Technology Center are taking the first steps in preparing for their chosen career. In preparing for any career, it is important to begin establishing a reference library of books, technical materials and tools to support their study and eventual practice in this specific career. All students are expected to purchase their own textbooks, workbooks, shop uniform, tools and supplies so they are prepared for the first day of class. **We highly recommend purchasing these items by July 1 to allow sufficient time for preparation and delivery.**

Instructions for purchasing textbooks, uniforms, tools and supplies may be found on the BCTC Website. Step 1. Go to: www.berkscareer.com

Step 2. Under “Quick Links” click on *Books/ Tools/ Uniforms*

The following three icons will appear with more detailed instructions.



For Textbooks

A list of the first, second, and third year books will display. There will be a screen shot of the textbook, Author’s name, Edition and **ISBN number**, as well as approximate price from new to gently used. To purchase the textbook, click on the title of the book, or picture of the book, which will take you to Amazon.com. You may go to any on-line bookseller using the **ISBN number** in the search field. Follow the directions for making a purchase, and in most cases the textbooks will be delivered to your home address within a few days.



For Uniforms

Click on the link for the **“BCTC Uniform Store”**. **Choose East or West Campus. Then click on your program name.**

A list of required and optional items will display. All uniforms may be purchased safely and securely through Apex Advertising on the BCTC website. Simply follow the prompts for instructions.



For Tools and Supplies

A list of required tools and supplies will display by program.

Should you need assistance, please feel free to contact the BCTC Main Office at (610) 374-4073.

CAREER AND TECHNOLOGY CENTER

PORTFOLIO

A portfolio is a collection of work representing education, self-development, and career information. It should contain multiple pieces of information that will serve as proof of your training and achievements. Your portfolio will help you to prepare for and obtain employment, enter military service or college.

Each Berks Career and Technology Center student is required to complete a career portfolio.

Each student's portfolio should contain the following items:

- Title page
- Table of Contents
- Resume
- Academic achievements
- Career and Technical achievements
- Personal management skills
- Team-building skills
- Work experience
- Copies of all industry certificates
- Community activities
- Other related information

STUDENT PROJECT/CAPSTONE CHOICES

In accordance with the Berks Career and Technology Center program certificate completion requirements, a student must successfully complete a Student Project/Capstone under the guidance and direction of Berks Career and Technology Center faculty. Students must complete Learning Guide 98.04 and present their student project before Spring/Easter Break of their senior year. If not completed by the end of the third quarter, student will receive a grade of (I) incomplete for the quarter. A student must have successfully completed his/her Student Project/Capstone prior to participating in the Cooperative Education Program at the Berks Career and Technology Center.

The intent of the Student Project/Capstone is for Berks Career and Technology students to demonstrate and apply vocation and academic skills into a meaningful project. Some important skills all employees must possess include the ability to manage projects, find and use resources, read, write, compute, manage deadlines, and communicate. The project/capstone is to be included in your portfolio.

Students are required to select one of the following types of projects:

CTSO-Based: This project focuses on the student's extensive involvement (e.g., Student Officer) in a CTSO. The student will be responsible for documenting her/his participation as a CTSO officer, outlining her/his organization and leadership skills, and showcasing an initiative she/he personally directed toward an identified outcome. The student will record her/his experiences along the way in a journal. The student will use these journal entries to compose a summary paper of her/his project. The summary paper may contain elements of a research paper, and therefore, sources will need to be documented properly. Lastly, the student will deliver an oral presentation about her/his project.

Project-Based: This project is related to a student's focus area and/or provides an extended learning experience. This option will result in a tangible product that is designed, developed, and created by the student. The student will record his/her experiences along the way in a journal/project log. The student will use these entries to compose a summary paper of his/her project. The summary paper may contain elements of a research paper, and therefore, sources will need to be documented properly. Lastly, the student will deliver an oral presentation about his/her project.

Community Service-Based: For this project, a student will provide a needed and viable service to the community, a non-profit agency, or organization. The student will participate in a non-profit activity of a specified length. The student will record her/his experiences along the way in a journal/project log. The student will use these entries to compose a summary paper of her/his project. The summary paper may contain elements of a research paper, and therefore, sources will need to be documented properly. Lastly, the student will deliver an oral presentation about her/his project.

Research-Based (This option is available only to students who have completed less than 50% of the program curriculum): For this project, a student will explore an unfamiliar area of interest related to the student's program area. The student will gather information and facts about a certain topic for the purpose of creating a research paper and quality presentation. For this project, the student should investigate current issues in his/her field of study and be prepared to present materials in an oral presentation that depict an accurate and detailed representation of his/her research through charts, graphs, historical information, etc.. Research can be conducted through a wide variety of sources, including the internet, interviews with subject matter experts, literature on the subject, etc. No project component is required for this selection.

WORK-BASED EDUCATION

The purpose of the Work-Based Education program is to provide occupational training, which supplements and enriches the educational experiences of students by utilizing the resources of business and industry. The program takes the school curriculum beyond the walls of Berks Career and Technology Center and serves as a bridge between the theoretical world of the classroom and the actual experiences encountered by workers. The program can involve one or all of three different options: job shadowing, internship/clinical experience (paid or unpaid), and/or cooperative education.

By participating in **job shadowing**, students can learn about work environments and job responsibilities. Students follow workers as they go about their daily duties in their everyday work environments. They benefit from seeing work as it is in real life and learn firsthand from people who have careers in fields that interest them. The program is designed to give students a better understanding of careers in order to make informed career decisions.

Students can also participate in internships; these are work experiences that allow students to complete skill tasks in a real-world environment. The internships will provide a start/end date with an educational goal attached to their individual career field. Internships can be paid or unpaid and give the student the opportunity to explore a career in more depth.

Internship students in Cosmetology, Dental Occupation, Health Occupations, SMaRT, Health Related Technology, Early Childhood Education, and Protective Services programs have opportunities to participate in **clinical experiences**. Students are assigned to in-school and off-campus worksites where they can become involved in the day-to-day activities of those locations. Examples of clinical sites include, but are not limited to, area hospitals, retirement communities, nursing facilities, day care centers, fire departments, and ambulance associations.

Cooperative education provides occupational training that supplements the in-school educational experiences of students. One half of the day is spent at the sending school district taking academic subjects; the other half of the day is spent on the job. Students are paid at least the prevailing minimum wage for their time at work.

Thus, the Work-Based Education program is a collaborative effort by the school, business, and industry for the training of career and technical school students. Those students who meet basic trade and technical skill standards, exhibit good attitudes and habits, and maintain acceptable grades are eligible for these experiences.

QUALIFICATIONS

Students may be placed in work-based education cooperative education experiences when the following conditions are met:

- The job is related to the student's career objective.
- The job offers a training opportunity, which adequately addresses the student's abilities and goals.
- The work-based education experience will benefit the student.
- The student has completed all instructor indicated tasks toward the selected career objective, including Career Education and Work tasks.
- ***Per program teacher; The student has completed the written and product components of his/her student project and the oral presentation has been scheduled. *(Optional by program)*

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Berks Career and Technology Center no discriminará por razones de raza, color, edad, religión, sexo, orientación sexual, origen, domicilio, si es veterano, nacionalidad, estado civil, embarazo, incapacidad o cualquier otra característica protegida legalmente en su proceso de empleo, programas educativos ni actividades o proceso de admisiones como es requerido por el Código Escolar del Estado de Pennsylvania y las regulaciones ADA, Título VI, Título IX y Sección 504 y proporcionará un acceso igualitario a los Exploradores de America y otros grupos de jóvenes designados. Fomentamos que todo estudiante considere registrarse en programas educativos no tradicionales a su sexo. Berks Career and Technology Center tomara pasos para asegurar que la falta de conocimiento de Ingles no sea una barrera para su admisión y participación en los programas educativos y técnicos. También se harán acomodaciones razonables para personas con impedimentos físicos. Cualquier forma de acoso, incluyendo intimidación por parte de cualquier individuo no será permitida. La política, regulaciones y prácticas de BCTC serán guiadas por esta declaración. Dudas o preguntas acerca del cumplimiento del Título IX, Sección 504 o Título VI deberán dirigirse a la oficina del Director Ejecutivo en 1057 County Rd, Leesport PA 19533, 610-374-4073.