

# Bedford County Technical Center

*Enriching the Quality of Life in Our Community Through Specialized Training Opportunities*

## 2023-2024 Program of Studies



### Member School Districts

Bedford Area School District ♦ Everett Area School District

### Participating School Districts

Chestnut Ridge School District ♦ HOPE for Hyndman Charter School  
Northern Bedford County School District ♦ Tussey Mountain School District



195 Pennknoll Road ♦ Everett, PA 15537-6946 ♦ Phone: 814-623-2760 ♦ [www.bedfordctc.org](http://www.bedfordctc.org)

# Message from the Executive Director

Message from the Executive Director:

Welcome to the Bedford County Technical Center. We are pleased to offer students in the community a total of eight career and technical education programs. These programs are aligned to seven career clusters and are approved by the Pennsylvania Department of Career and Technical Education. Our programs successfully prepare our students to be career and college ready.

Our two member school districts are the Bedford and Everett Area School Districts. In addition, we receive students from the remaining county schools on a tuition basis. These include Chestnut Ridge, Forbes Road, Northern Bedford, and Tussey Mountain School Districts, as well as the HOPE for Hyndman Charter School and Forbes Road School District.

Our students have historically surpassed the state average on the NOCTI exam in their respective areas of study. In addition, students at the BCTC have the opportunity to participate in various externships, obtain multiple industry recognized certifications, and earn college credits upon completion of their program of study.

*Michael C. O'Dellick*

## NOCTI and National College Credit Recommendation Service (NCCRS) Credits

Experienced industry experts and professors working with The National College Credit Recommendation Service (NCCRS), evaluated the rigor of NOCTI assessments to translate the content into college credit equivalencies ranging from one to four credits.

How does credit for NOCTI Assessments work?

- Students must meet a 70% benchmark on an approved NOCTI multiple-choice assessment to be eligible for the College Credit Recommendation Report which is automatically generated as part of the NOCTI scoring package for all eligible students.
- The report can be used as part of a student's portfolio, and more importantly, can be presented at any of the 1,500+ participating colleges and universities for college credit consideration.
- Need an official transcript? NOCTI has collaborated with Excelsior College to offer students an option for an "official" transcript.
- For more information about the process for obtaining the college credit recommendation report and/or an official transcript, please visit:

[www.nocti.org/nccrs.cfm](http://www.nocti.org/nccrs.cfm)

The Bedford County Technical Center does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs or activities. The Bedford County Technical Center affirms that all employment practices will be done in adherence to Title IX of the Educational Amendments of 1972, Title VI and VII of the Civil Rights Act of 1964, and Section 504 of the Rehabilitation Act of 1973. We further affirm that all curriculum offerings and student enrollment practices will be handled without discrimination based on sex, age, race, color, religion, national origin, or non-job related handicaps or disabilities. Inquiries may be directed to: Title IX Coordinator at 195 Pennknoll Road, Everett, PA 15537 or at (814) 623-2760 ext. 4800 or [modellick@bedfordctc.org](mailto:modellick@bedfordctc.org).

# SOAR and College Credit

Dear Bedford County Technical Center Students and Parents,

Congratulations on your selection of a Career and Technical Education (CTE) Program of Study (POS). **SOAR** (Students Occupationally and Academically Ready) is a Pennsylvania program which allows CTE students to earn free college credits at select postsecondary schools. You have earned these free credits if you score well on your NOCTI senior year assessment, and if your teacher can confirm that you have completed your entire CTE program task list. To obtain these free credits, you must submit the proper paperwork to the college as outlined below. This paper requires administrative signatures for submittal. Please follow the instructions carefully. Should you have any questions or need any help with this process, please contact our school career counselor, Mr. Sam Shuss, at [sshuss@bedfordctc.org](mailto:sshuss@bedfordctc.org) or 814-623-2760.

## **STEP 1: SEE WHICH COLLEGE OFFER FREE CREDITS FOR YOUR CTE PROGRAM OF STUDY.**

A website identifies which Pennsylvania postsecondary schools award free credits for each CTE Program of Study. Below are instructions for this website.

To find the free credits offered for Pennsylvania Career and Technical Educational Programs of Study (POS) visit this website: <http://www.collegetransfer.net>. After selecting your Program of Study and your high school graduation year, you can view all of the schools offering free credits for your particular CTE program.

How to find schools and free credits offered:

- Go to [www.collegetransfer.net](http://www.collegetransfer.net)
- Scroll over to the **search** tab at the top of the page
- Scroll down and click on **BUREAU OF CTE SOAR PROGRAMS**
  - A box will pop up
    - Step 1: Using the dropdown box, select your high school Program of Study **By title or CIP Code**
    - Step 2: Select **your graduation year**
    - Click the **Search** button
- A list of schools will appear with the courses available for no cost and the majors that accept these credits at the school. This list is updated annually; additionally BCTC programs have added postsecondary offerings that are located as each program's overview page.

## **STEP 2: APPLY TO THE COLLEGE AND COMPLETE FINANCIAL AID APPLICATION**

Complete the school application process and select a major that accepts the credits for your CTE Program of Study (POS) high school program. It is best to do this in the fall of your senior year. To be eligible for any financial aid and most scholarships, your financial aid application must be completed in the spring of your graduation year.

# SOAR and College Credit

**STEP 3: IN LATE MAY OR JUNE, AS SOON AS YOU GRADUATE, YOU FORWARD THE SOAR/POS PAPERWORK TO YOUR Postsecondary School's ADMISSIONS OFFICE.**

Below are the steps to properly complete and submit all the necessary materials to receive your free SOAR college credits. If you have any questions, contact your career counselor, Mr. Sam Shuss at [sshuss@bedfordctc.org](mailto:sshuss@bedfordctc.org). **It is your responsibility to submit these materials to the postsecondary institution.** You must take charge of this process and make certain that everything is completed and forwarded in a timely fashion.

**SOAR/POS Paperwork to be collected by the student and forwarded to the postsecondary school:**

- ☐ Copy of High School Diploma (you obtain at graduation)
- ☐ Official High School Transcript (must be sent separately by high school counselor)
- ☐ NOCTI Skills Certificate or Certificate of Completion (Obtain from BCTC)
- ☐ POS Perkins Statewide Articulation Agreement Student Documentation Cover Sheet (obtain from BCTC)
- ☐ Secondary Program Competency Task List signed by CTE program instructor (obtain from CTE program instructor)

Mail these materials to the postsecondary institution admission office. Send them as early as possible so that your fall semester college schedule will reflect these college courses and credits.

Using the free college credit you earned through your performance and hard work at BCTC will help you progress in your chosen career path. The credits are good for up to 3 years from the date of high school graduation. Collect these documents, even if you are not yet certain of your future plans.

Good luck in your career and postsecondary studies. Congratulations for earning free postsecondary credit during high school through your attendance at Bedford County Technical Center and in cooperation with your high school.

In addition, BCTC has a number of direct articulation agreements with many postsecondary institutions.

For additional information on any postsecondary credit opportunity please contact, Mr. Shuss, BCTC School Counselor at [sshuss@bedfordctc.org](mailto:sshuss@bedfordctc.org) or 814-623-2760.



# Table of Contents

## Bedford County Technical Center Program of Studies

### **Career and Technical Education Programs:**

*All programs include the following information pages: Program Overview Page, Articulations Page, and Scope and Sequence.*

**Agriscience**

**Automotive Technology**

**Biotechnology**

**Building Construction**

**Cosmetology**

**Culinary Arts**

**Health Assistance**

**Welding**

### **Career and Technical Student Organizations (CTSO):**

The Bedford County Technical Center supports the following CTSOs: FBLA (Future Business Leaders of America), FFA (Future Farmers of America), NTHS (National Technical Honor Society), and SkillsUSA. A CTSO offers leadership, citizenship and character development programs and activities to complement skill training available in the public schools and community colleges. These programs help students better prepare themselves for the labor market. A CTSO emphasizes respect for dignity of work, high standards in trade ethics, workmanship, scholarship, and safety. It promotes understanding of the free enterprise system and encourages development of patriotism through the practice of democracy in the club.

Students are motivated to learn and excel through opportunities to acquire leadership and an understanding of the democratic process, to work together to improve school and community, and to receive individual recognition for both skill and leadership achievement.

CTSOs conduct contests on the local, state, and national levels in which students demonstrate the occupational and leadership skills they have learned. During the annual national-level SkillsUSA Competition, more than 5,000 students compete in 70 occupational and leadership skill areas. SkillsUSA programs also help to establish industry standards for job skill training in the classroom. The achievement program recognizes the individual student for progress in occupational and leadership development.

Students must be in good standing in order to participate in CTSO activities and competitions.

# Career and Technical Student Organizations



**National Technical Honor Society:** The National Technical Honor Society believes in CTE students, the heartbeat of today's workforce. NTHS celebrates the accomplishments of today's career and technical education students, empowering them to know the value and impact of their career paths and trades. Students must be high achieving in the classroom and in the shop/lab, have a strong work ethic, and have strong character. To be eligible to join NTHS, a BCTC student must have at least one year at the BCTC with a 3.25 GPA or higher at the BCTC, a cumulative GPA of 3.00 or higher, and recommendations of the BCTC teacher and the sending school administration.



**SkillsUSA:** SkillsUSA is a partnership of students, teachers, and industry working together to ensure America has a skilled workforce. We help each student excel. A nonprofit national education association, SkillsUSA serves middle school, high school and college/postsecondary students preparing for careers in trade, technical and skilled service occupations. SkillsUSA is recognized by the U.S. Department of Education and the U.S. Department of Labor as a successful model of employer-driven workforce development.



**FFA:** FFA is a dynamic youth organization that changes lives and prepares members for premier leadership, personal growth, and career success through agricultural education. FFA develops members' potential and helps them discover their talent through hands-on experiences, which give members the tools to achieve real-world success. FFA is an intracurricular student organization for those interested in agriculture and leadership. It is one of the three components of agricultural education. The official name of the organization is the National FFA Organization. The letters "FFA" stand for Future Farmers of America. These letters are a part of our history and our heritage that will never change.



**FBLA:** The Future Business Leaders of America is the largest career and technical student organization in the world. FBLA is dedicated to preparing students for careers in business. The organization inspires and prepares students to become community-minded business leaders in a global society through relevant career preparation and leadership experiences.



**BCTC WORKS:** The BCTC WORKS student organization provides leadership opportunities for students who are interested in promoting a strong and supportive school culture, developing workforce readiness skills and habits among classmates, and preparing students for workforce and postsecondary transitions. **WORKS** is an acronym that stands for **W**orkforce Ready, **O**pportunity, **R**espect, **K**indness, and **S**afety. The program is based on the SWPBIS framework.

# Mission Statement

The mission of the Bedford County Technical Center is to enrich the quality of life in our community through specialized learning opportunities.

## Vision Statement

Our vision is to be the premier provider of specialized learning opportunities in South Central Pennsylvania allowing for the success of all our stakeholders.

## Our Shared Values

- ✓ Learning will take place in a safe, secure and student centered environment.
- ✓ All stakeholders will instill the BCTC **W.O.R.K.S.** expectations with students: **Workforce Ready, Opportunity, Respect, Kindness, and Safety.**

## About Students

- ✓ All students want to learn and can learn when their emotional, physical, and social needs are met.
- ✓ All students need nurturing support and recognition to foster self-esteem.
- ✓ All students can become successful adults.
- ✓ Students must attend school and actively participate in learning.
- ✓ A customized learning program for each student must be developed.

## About Teachers

- ✓ Teachers must be passionate, caring and respectful.
- ✓ Teachers must be focused on student success.
- ✓ Teachers must be knowledgeable about content and methodology.
- ✓ Teachers must be lifelong learners.
- ✓ Teachers must be innovative and positive as well as resilient and reflective.

## About Administration

- ✓ Administration will support and guide the growth in all stakeholders.
- ✓ Administration will engage with community stakeholders to support the vision, mission, and goals of the BCTC.

The Bedford County Technical Center does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs or activities. The Bedford County Technical Center affirms that all employment practices will be done in adherence to Title IX of the Educational Amendments of 1972, Title VI and VII of the Civil Rights Act of 1964, and Section 504 of the Rehabilitation Act of 1973. We further affirm that all curriculum offerings and student enrollment practices will be handled without discrimination based on sex, age, race, color, religion, national origin, or non-job related handicaps or disabilities. Inquiries may be directed to: Title IX Coordinator at 195 Pennknoll Road, Everett, PA 15537 or at (814) 623-2760 ext. 4800 or [modellick@bedfordctc.org](mailto:modellick@bedfordctc.org).

## Parents

- ✓ Parents will be active in their child's education.
- ✓ Parents will hold their children accountable for their learning.
- ✓ Parents will support the programs, policies, and procedures at the BCTC.

## About Our Community

- ✓ BCTC is a partner among the five Bedford County school districts, parents, staff, and the community at large.
- ✓ Authentic learning experiences must be extended beyond the walls of the classroom.
- ✓ The entire learning community must be committed to the success of each student.
- ✓ Teachers must be focused on student success.

## About Us Summary

The Bedford County Technical Center is a shared-time career and technical school that serves the Bedford and Everett school districts. Three other districts including Tussey Mountain, Northern Bedford, and Chestnut Ridge and one charter school, HOPE for Hyndman, send students on a paid tuition basis.

The governing body of the school is a Joint Operating Committee (JOC) consisting of nine representatives, five from Bedford and four from Everett. In addition to the JOC, a General Advisory Council, composed of representatives from education, industry, business, and students, advise the administration and JOC on matters pertaining to philosophy, objectives, and program needs. Also, each program area has an Occupational Advisory Committee (OAC) that provides current information and support as it relates to their field.

Bedford County Technical Center delivers educational services to students in grades 10, 11, and 12 during three sessions. The eight occupational areas and the capstone cooperative education program comply with Chapter 4 and Chapter 339 of the Pennsylvania School Code. Student outcomes are measured in terms of competencies found in Chapter 4; therefore, programs of study offered at BCTC reflect the state mandates for career and technical education.

High school students may apply for early college credit work while at the Technical Center. The participating districts have also entered into an agreement with Allegany College of Maryland (ACM) to operate a Technical College in partnership with the Bedford County Technical Center. Adults who wish to pursue a technical credential may apply for course work at Allegany College of Maryland. Applications are available at the ACM Office at the Bedford County Technical Center.



# AGRISCIENCE

**PDE CIP 1.0000**

Instructor - Scott Myers  
smyers@bedfordctc.org

Instructional Aide - Denise Rodgers  
drodgers@bedfordctc.org



The Agriscience Program (CIP: 01.000) offers a comprehensive animal and plant science; agricultural mechanics; environmental science; food science; farm management; and record-keeping program that is laboratory based using a hands-on approach. The program prepares students for agricultural, biological, scientific, laboratory, and post-secondary pursuits. The BCTC houses an active chapter of the National FFA Organization and is an integral part of building leadership personal growth, and career success for students in the program. The FFA organization also provides an opportunity for skills competitions, and emphasizes public speaking, debate, and demonstration of agriscience career proficiency. This course helps students understand the important role agriculture serves as the agriscience industry moves into the future.

## Industry Certifications

- PA Beef Quality Assurance
- Youth Pork Quality Assurance
- Youth for the Quality Care of Animals (YQCA)
- Dairy Leaders of America
- OSHA 10 Agriculture
- NOCTI - Production Agriculture (3063) with advanced certification is administered upon course completion.

## Class Requirements

Protective Shoes/Boots

## Courses of Study

- Intro. to Ag. Sciences
- Animal Sciences
- Plant Sciences
- Horticulture
- FFA and Leadership
- Supervised Ag. Experiences
- Agricultural Mechanics
- Food Science
- Environmental Sciences
- Aquaculture
- Farm Management
- Record Keeping

## Career Opportunities

- Marketing, Merchandising, & Sales Representatives
- Education & Communication Specialists
- Social Services Professionals
- Agricultural Production Specialists
- Managers & Financial Specialists
- Scientists, Engineers, and Related Professions
- And Many More

**Average Wage:**  
**\$15 to \$36 per hour (PA Dept. of Labor)**  
**Varies by job, education, and experience.**

## Postsecondary Articulations & Opportunities

BCTC's Agriscience program has local agreements for the student to earn free credits to continue his/her education:

**Allegany College of Maryland**

**Pa. Highlands Community College**

For more information about this program or other programs at the Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)  
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# Agriscience Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: Safety in Agriculture	30 hours	Unit 1: History of Agriculture	30 hours	Unit 1: Career Readiness	30 hours
Unit 2: Small Gas Engines	30 hours	Unit 2: Electricity and Electrical Wiring	30 hours	Unit 2: Agriculture Engineering Technology	30 hours
Unit 3: Livestock Technology	60 hours	Unit 3: Animal Nutrition and Reproduction	60 hours	Unit 3: Veterinary Sciences	60 hours
Unit 4: Plant Science	60 hours	Unit 4: IPM and Crop Production	60 hours	Unit 4: Grassland Management and Soil Science	60 hours
Unit 5: Ecosystems and Wildlife	60 hours	Unit 5: Forestry	60 hours	Unit 5: Aquaculture and Hydroponics	60 hours
Unit 6: Introduction to Dairy Science	30 hours	Unit 6: Introduction to Dairy Herd Management	30 hours	Unit 6: Introduction to Dairy Business Management	30 hours
Unit 7: Introduction to Biotechnology	30 hours	Unit 7: Food Science	30 hours	Unit 7: Agribusiness and Farm Business Management	30 hours
Unit 8: FFA, Supervised Agricultural Experience, Career Development Events, and Leadership	60 hours	Unit 8: FFA, Supervised Agricultural Experience, Career Development Events, and Leadership	60 hours	Unit 8: FFA, Supervised Agricultural Experience, Career Development Events, and Leadership	60 hours

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# AUTOMOTIVE TECHNOLOGY

**PDE CIP 47.0604**

Instructor - Kevin Lawton  
klawton@bedfordctc.org

Instructional Aide - Rhonda Rhodes  
rrhodes@bedfordctc.org



The Automotive Technology program provides students with theory and hands-on experience using the latest training and diagnostic equipment to learn trouble shooting and repair of all modern vehicles. This Program is a N.A.T.E.F. certified program, giving students enrolled the best training and preparation to complete their ASE certification. Through our program, employability skills, safety and work habits are stressed. The Automotive Technology program provides students with a system approach to all aspects of automobile and light truck maintenance and repair. Our goal is to provide graduates with a strong working knowledge of the automotive industry. This program places an emphasis on engine diagnostics/repair, engine performance, automotive electricity/electronics, steering, suspension and brake systems.

## Career Opportunities

- Automotive Technician
- Service Manager
- Auto Diagnostician
- Independent Garage Owner
- Automotive Salesperson
- Auto Parts Manager
- And Many More

**Average Wage - \$20.21/hr.**  
**(2021 - Pa. Dept. of Labor)**

## Courses of Study

- Shop and Work Safety
- Engine Diagnostics/Repair
- Engine Performance
- Automotive Electricity/Electronics
- Steering
- Suspension
- Brake Systems

## Industry Certifications

- Automotive Service Excellence (ASE)
  - Transmission & Transaxle
  - Service & Technology
  - Brakes
  - Electrical/Electronic Systems
  - Performance & Repair
  - Heating & Air Conditioning
  - Maintenance /Light Repair
  - Manual Drive Train & Axle
- PA State Inspection and Emissions License
- ALI - Lifting It Right
- OSHA 10 Automotive
- SP/2 Automotive Service Safety
- SP/2 Automotive Service Pollution Prevention
- NOCTI - Auto Mechanics Tech (7837)

## Class Requirements

Uniform (shirt and pants)  
Protective Shoes/Boots  
Additional Safety Glasses

## Postsecondary Articulations & Opportunities

BCTC's Automotive Technology program has local agreements for the student to earn free credits to continue his/her education:

**Allegany College of Maryland**  
**Rosedale Technical College**

**University of Northwestern Ohio**  
**Pa. Highlands Community College**

BCTC Students may also qualify for statewide articulations through the SOAR Program. Those educational institutions are:

**Harrisburg Area Community College**  
**Delaware County Community College**  
**Northampton Co. Area Comm. College**  
**Allegany College of Maryland**  
**Commonwealth Technical Institute**  
**Lancaster County Career & Technology Center**

**Community College of Allegheny Co.**  
**Luzerne County Community College**  
**Community College of Philadelphia**  
**Johnson College**  
**Rosedale Technical College**

For more information about this program or other programs at the  
Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)  
The Bedford County Technical Center is an Equal Opportunity Educational Institution

# Automotive Technology Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: Orientation	10 hours	Unit 1: Orientation	30 hours	Unit 1: Orientation	10 hours
Unit 2: Safety and Foundation	20 hours	Unit 2: Safety and Foundation	20 hours	Unit 2: Safety and Foundation	20 hours
Unit 3: Tools	20 hours	Unit 3: Tools	20 hours	Unit 3: Tools	20 hours
Unit 4: Fasteners	20 hours	Unit 4: Fasteners	20 hours	Unit 4: Fasteners	20 hours
Unit 5: Steering	60 hours	Unit 5: Engine Repair	150 hours	Unit 5: Electrical	150 hours
Unit 6: Suspension	90 hours	Unit 6: Engine Performance	100 hours	Unit 6: Using DVOM	30 hours
Unit 7: Alignment	40 hours	Unit 7: Manual Drive Train and Axles	20 hours	Unit 7: Engine Performance	70 hours
Unit 8: Brakes	100 hours	Unit 8: Automatic Transmission and Transaxle	20 hours	Unit 8: Heating and Air conditioning	40 hours

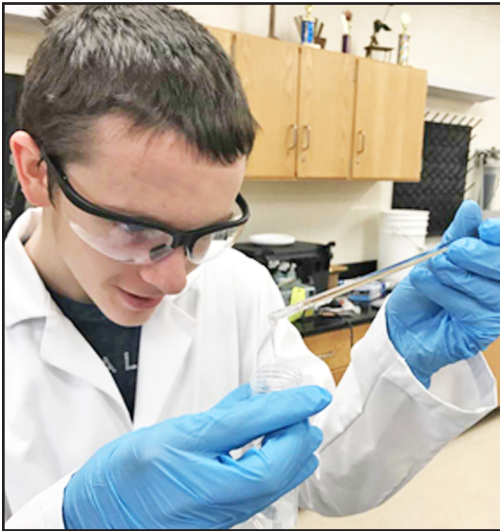


# BIOTECHNOLOGY

**PDE CIP 26.1201**

Instructor - Scott Myers  
smyers@bedfordctc.org

Instructional Aide - Denise Rodgers  
drodgers@bedfordctc.org



Biotechnology is a hands-on program that combines traditional plant and animal breeding with genetic engineering techniques to develop, modify, or improve living organisms. Students will learn to use a variety of laboratory equipment including laboratory glassware, volumetric and electrophoresis equipment, spectrophotometer, centrifuges, autoclaves, microscopes, PH meters, and many other technical laboratory tools. Instruction will include principles of scientific research; microbiology; genetic transfer; genetically modified organisms; and Biotechnology in plant science, animal science, medicine, and ecology. This course will help students to understand the important role biotechnology serves in today's global economy

## ***Industry Certifications***

- OSHA 10 General
- NOCTI - Biotechnology (4075)

## ***Class Requirements***

Safety Glasses

## ***Courses of Study***

- Principles of Scientific Research
- Microbiology
- Genetic Transfer
- Genetically Modified Organisms
- Biotechnology in Plant Science, Animal Science, Medicine, and Ecology

## ***Career Opportunities***

- Marketing, Merchandising, and Sales Representatives
- Education and Communication Specialists
- Social Services Professionals
- Production Specialists
- Managers and Financial Specialists
- Scientists, Engineers, and Related Professions

**Avg. Wage: \$29.73/hr**  
**(2021 PA Dept. of Labor)**  
**Varies by job, education, and experience.**

## ***Postsecondary Articulations & Opportunities***

BCTC's Biotechnology program has local agreements for the student to earn free credits to continue his/her education:

**Allegany College of Maryland**

**Pa. Highlands Community College**

**For more information about this program or other programs at the Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)**  
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# Biotechnology Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: Safety in the Biotechnology Lab	30 hours	Unit 1: Safety in the Biotechnology Lab	30 hours	Unit 1: Safety in the Biotechnology Lab	15 hours
Unit 2: What is Biotechnology?	60 hours	Unit 2: Identifying Potential Biotechnology Products	60 hours	Unit 2: Introduction to Plant Biotechnology	60 hours
Unit 3: The Raw Material of Biotechnology	60 hours	Unit 3: Spectrophotometers and Concentration Assays	60 hours	Unit 3: Biotechnology in Agriculture	60 hours
Unit 4: The Basic Skills of the Biotechnology Workplace	60 hours	Unit 4: The Production of Recombinant Biotechnology Products	60 hours	Unit 4: Biotechnology in Medicine	60 hours
Unit 5: Studying DNA Molecules	60 hours	Unit 5: Bringing a Biotechnology Product to Market	60 hours	Unit 5: Making DNA Molecules	60 hours
Unit 6: Introduction to Studying Proteins	60 hours	Unit 6: Fermentation	45 hours	Unit 6: Advanced Biotechnology Techniques	60 hours
Unit 7: Zebra Fish Research	30 hours	Unit 7: Cell Culture	45 hours	Unit 7: Animal Reproductive Biotechnology	30 hours
				Unit 8: Plant Tissue Culture	15 hours

# BUILDING CONSTRUCTION

**PDE CIP 46.9999**

Instructor - Steve Sellers  
ssellers@bedfordctc.org

Instructional Aide - Teri Waltman  
twaltman@bedfordctc.org



The Building Construction Program provides students with an exciting career that will teach entry-level job skills for the construction industry. Tool and job-site safety in compliance with OSHA standards are stressed. Instruction is provided in carpentry, masonry, plumbing, electrical, and painting/decorating. Skills such as cost estimating, cutting, fitting, fastening, finishing, blueprint reading and following technical specifications are also taught.

## ***Industry Certifications***

- OSHA 10 Construction
- SP/2 Construction
- PA Builders Association
- NOCTI - Building Construction Occupations (4011)

## ***Courses of Study***

- Carpentry
- Masonry
- Plumbing
- Electrical
- Painting/Decorating
- Cost Estimating
- Cutting
- Fitting
- Fastening
- Finishing
- Blueprint Reading

## ***Career Opportunities***

- Carpenters
- Masons
- Electricians
- Manufacturing Plants of building units, components or building materials
- Self-employment
- Industrial maintenance technicians

**Average Wage - \$26.77/hr.**  
**(2021 - Pa. Dept. of Labor)**  
**Varies by job, education, and experience**

## ***Postsecondary Articulations & Opportunities***

BCTC's Building Construction program has local agreements for the student to earn free credits to continue his/her education:

**Triangle Tech**

**Pa. Highlands Community College**

## ***Class Requirements***

Protective Shoes/Boots  
Additional Safety Glasses

For more information about this program or other programs at the Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)  
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# Building Construction Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: OSHA Construction Safety	20 hours	Unit 1: Safety/ Tool Maintenance	40 hours	Unit 1: Safety/ Air Tools	40 hours
Unit 2: Hand Tools/ Safety	80 hours	Unit 2: Site Layout; Floor and Wall Framing	90 hours	Unit 2: Plans and Blue Prints	40 hours
Unit 3: Power Tools/ Safety	130 hours	Unit 3: Roof Framing and Coverings	70 hours	Unit 3: Estimating Materials	60 hours
Unit 4: Stationary Machines/ Safety	40 hours	Unit 4: Stairs	30 hours	Unit 4: Advanced Framing	140 hours
Unit 5: Masonry Block and Brick	30 hours	Unit 5: Masonry Block and Brick	30 hours	Unit 5: Concrete	20 hours
Unit 6: Plumbing	20 hours	Unit 6: Plumbing	20 hours	Unit 6: Plumbing	20 hours
Unit 7: Electrical	20 hours	Unit 7: Electrical	20 hours	Unit 7: Electrical	20 hours
Unit 8: Interior Finishes	20 hours	Unit 8: Insulating, Wall Components and Exterior Finishes	60 hours	Unit 8: Interior and Exterior Finishes, Wall Components	20 hours



# COSMETOLOGY

**PDE CIP 12.0401**

Instructor - Cathy Melius  
cmelius@bedfordctc.org

Instructional Aide - Rhonda Rhodes  
rrhodes@bedfordctc.org



The Cosmetology Program provides students with a unique learning experience as they perform all the necessary tasks to earn their cosmetology license. Theory is an important part of this course, as it gives the students the information they need to learn in order to pass their State Board Exam. The students have progressive hands-on classes which enable them to perfect their skills and apply the concepts learned in theory. Students also have the opportunity to work with the public, giving them job readiness and the capability to gain communication skills. Instruction is provided in basic skills: shampooing, scalp treatments, manicuring, hairstyling, cold waving, pedicuring, and haircutting; and more advanced skills: removal of superfluous hair, thermal waving and curling, chemical hair relaxing, skin care and make-up, hair coloring and lightening, chemistry, shop management and State Board of Cosmetology laws.

## ***Career Opportunities***

- Cosmetology Operator
- Teacher
- Nail Technician
- Consultant
- Esthetician
- Salon Owner/Manager

**Average Wage:**  
**\$11 to \$17/hr.**  
(PA Dept. of Labor)  
**\$20.73/hr. (indeed.com)**

## ***Courses of Study***

- Basic Cosmetology Skills
- Advanced Cosmetology Skills
- Anatomy
- Chemistry
- Shop management
- State Board of Cosmetology laws

## ***Industry Certifications***

- Pennsylvania Cosmetology License
- SP/2 Cosmetology
- NOCTI - Cosmetology PA (8295)

## ***Class Requirements***

- Smock
- Black Uniform Pants
- Nonslip Shoes
- Mannequin
- Personal Hygiene

## ***Postsecondary Articulations & Opportunities***

BCTC's Cosmetology program has local agreements for the student to use hours earned at the BCTC to continue his/her education:

**Douglas Education Center**

**Altoona Beauty School**

For more information about this program or other programs at the Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)  
The Bedford County Technical Center is an Equal Opportunity Educational Institution

# Cosmetology Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: Safety/Sanitation	40 hours	Unit 1: Safety/Sanitation	40 hours	Unit 1: Safety/Sanitation	20 hours
Unit 2: Hair and Scalp Care	65 hours	Unit 2: Chemistry/Electricity	25 hours	Unit 2: Make Up	15 hours
Unit 3: Hairstyling	50 hours	Unit 3: Hairstyling	50 hours	Unit 3: Hairstyling/Hair Straightening	50 hours
Unit 4: Manicuring and Pedicuring	40 hours	Unit 4: Manicuring and Pedicuring	40 hours	Unit 4: Manicuring/Pedicuring	15 hours
Unit 5: Chemical Hair Texture	20 hours	Unit 5: Chemical Hair Texture	60 hours	Unit 5: Chemical Hair Texture	60 hours
Unit 6: Skin Care / Facials	20 hours	Unit 6: Skin Care/ Facials	25 hours	Unit 6: Skin Care / Facials	5 hours
Unit 7: Hair Coloring	40 hours	Unit 7: Hair Coloring	40 hours	Unit 7: Hair Coloring	40 hours
Unit 8: Hair Cutting	40 hours	Unit 8: Hair Cutting	40 hours	Unit 8: Hair Cutting	40 hours
Unit 9: Business Practices/Cosmetology Laws	35 hours	Unit 9: Professional Attitude	20 hours	Unit 9: Histology/Physiology	26 hours
Unit 10: Temporary Hair Removal	10 hours	Unit 10: Care of all Hair Types	40 hours	Unit 10: Clinic	89 hours

\*170 additional clinical hours available after school on Thursdays and full days during senior year in order to accumulate 1250 hours to sit for state cosmetology licensure boards.

# CULINARY ARTS

**PDE CIP 12.0508**

Instructor - Robin Sheeder  
rsheeder@bedfordctc.org

Instructional Aide - Denise Rodgers  
drodgers@bedfordctc.org



This program is offered in a newer training facility, equipped with state of the art kitchen equipment and tools. The purpose of the program is to train future leaders in the hospitality industry. Extensive experience in catering special public events is available. Students work on the skills necessary to master various food service study areas. The program includes: Food preparation techniques, food presentation and service, kitchen management, menu design/development, and culinary math skills.

## Industry Certifications

- ServSafe
  - Food Handler Certification
  - Manager Certifications
  - Allergens
- ACF - Certified Fundamental Cook
- OSHA 10 Culinary
- NOCTI - Culinary Arts Cook (4536)

## Courses of Study

- Line Cook/Fry Station
- Cold Prep/Salads
- Prep/Entree
- Safety/Sanitation
- Front of House Duties
- Pastries/Desserts

## Career Opportunities

- Pastry Chef
- Nutritionist
- Culinary Specialist
- Caterer
- Restaurant Manager
- Sous Chef
- Head Chef
- Food Service Director
- Food Technologist
- Executive Chef
- Food Safety Specialist

**Average Wage - \$10.09 to 25.65/hr (2021 - Pa. Dept. of Labor) Varies by job, education, and experience**

## Postsecondary Articulations & Opportunities

BCTC's Culinary Arts program has local agreements for the student to earn free credits to continue his/her education:

**Allegany College of Maryland**  
**Pittsburgh Technical College**

**Indiana University of Pa. (Culinary)**

BCTC Students may also qualify for statewide articulations through the SOAR Program. Those educational institutions are:

**Harrisburg Area Community College**  
**Westmoreland Co. Community College**  
**Pa. Highlands Community College**

**Delaware County Community College**  
**Luzerne County Community College**

## Class Requirements

Culinary Jacket(s)  
Non-slip Shoes  
Proper Personal Hygiene

**For more information about this program or other programs at the Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)**  
**The Bedford County Technical Center is an Equal Opportunity Educational Institution**

# Culinary Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: Safety & Sanitation	70 hours	Unit 1: Safety & Sanitation	35 hours	Unit 1: Safety & Sanitation	35 hours
Unit 2: Prep & Entrée	50 hours	Unit 2: Prep & Entrée	65 hours	Unit 2: Prep & Entrée	50 hours
Unit 3: Cold Prep & Salads	50 hours	Unit 3: Cold Prep & Salads	30 hours	Unit 3: Cold Prep & Salads	35 hours
Unit 4: Pastries & Desserts	40 hours	Unit 4: Pastries & Desserts	75 hours	Unit 4: Pastries & Desserts	80 hours
Unit 5: Front of House	50 hours	Unit 5: Front of House	50 hours	Unit 5: Front of House	50 hours
Unit 6: Line Fry	40 hours	Unit 6: Line Fry	40 hours	Unit 6: Line Fry	40 hours
Unit 7: Food Service Industry	20 hours	Unit 7: Food Service Industry	25 hours	Unit 7: Food Service Industry	30 hours
Unit 8: Professionalism	40 hours	Unit 8: Professionalism	40 hours	Unit 8: Professionalism	40 hours



# HEALTH ASSISTANT

**PDE CIP 51.0899**

Instructor - Kesley McClelland  
kmcclelland@bedfordctc.org

Instructional Aide - Denise Rodgers  
drodgers@bedfordctc.org



The Health Assisting Program offers students the education to gain access to a versatile, in-demand health care career. The program is designed as a "cluster" program where students are introduced to the knowledge and skills needed for an entry-level career in the health-care field. This course also gives students who are interested in continuing their education after high school in any healthcare-related field a solid base of knowledge that will give them a step ahead in their post-secondary studies. Health Assisting program instruction provides a background in many subjects, including basic anatomy & physiology, infection control, human growth and development, first aid, medical terminology, medical office skills, and hands-on practical skills. Students develop their skills by volunteering at Pennknoll Village. We also do our best to partner with various health care facilities in the area for a job shadowing experience. These unique opportunities provide students with experience in patient interaction and the ability to acquire real-world knowledge.

## Industry Certifications

- American Heart Association
- First Aid
- BLS (CPR & AED)
- PA Direct Care Worker
- ACS Stop the Bleed
- OSHA 10 Healthcare
- Nurse Aide Training (PA NATCEP Course)
- NOCTI - Health Assisting (4243)

## Courses of Study

- Basic Anatomy & Physiology
- Infection Control
- Human Growth & Development
- First Aid
- Medical Terminology
- Medical Office Skills
- Hands-On Practical Skills

## Career Opportunities

- Direct Care Worker/Home Health Aide
- Medical /Dental Office Assistant
- Dietary Aide
- Unit Clerk/Receptionist
- Other Health Careers with additional education including CNA, LPN, RN, Physical/Occupational Therapy

**Average Wage: \$11.92 to 18.71/hr. (2021 - Pa. Dept. of Labor) higher wage available with more education.**

## Class Requirements

Scrubs (shirt and pants)  
Personal Hygiene

## Postsecondary Articulations & Opportunities

BCTC's Health Assisting program has local agreements for the student to earn free credits to continue his/her education:

**Allegany College of Maryland**

**Pa. Highlands Community College**

BCTC Students may also qualify for statewide articulations through the SOAR Program. Those educational institutions are:

**Commonwealth Technical Institute**  
**Pa. Highlands Community College**

**Greater Altoona Career & Tech Center**

For more information about this program or other programs at the Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)  
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# Health Assisting Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: Communication and Documentation	28 hrs	Unit 1: Health Career Exploration	28 hrs	Unit 1: Health Career Exploration	42 hrs
Unit 2: Safety	21 hrs	Unit 2: Nutrition	21 hrs	Unit 2: Human Growth & Development	99 hrs
Unit 3: Infection Control	21 hrs	Unit 3: Unit Clerk & Medical Assistant Clerical Skills	35 hrs	Unit 3: Death and Dying	21 hrs
Unit 4: Body Structure and Organization	14 hrs	Unit 4: Assisting with Physical Examinations	28 hrs	Unit 4: Body Systems	42 hrs
Unit 5: Integumentary System	14 hrs	Unit 5: Vital Signs	21 hrs	Unit 5: Mental Health Concepts	14 hrs
Unit 6: Skeletal System	21 hrs	Unit 6: Electrocardiograms	14 hrs	Unit 6: Safety/OSHA Certification	14 hrs
Unit 7: Muscular System	11 hrs	Unit 7: Assisting with Self Medication/Medical Math	21 hrs	Unit 7: Dental	20 hrs
Unit 8: Nervous System	14 hrs	Unit 8: Infection Control/ Microbiology/Medical Lab	28 hrs	Unit 8: Medical Terminology & Abbreviations	36 hrs
Unit 9: Special Senses	14 hrs	Unit 9: Emergency Care	35 hrs	Unit 9: Healthcare Provider Skills	36 hrs
Unit 10: Cardiovascular Syst.	18 hrs	Unit 10: Growth & Development	21 hrs	Unit 10: Career & Technical Student Organization	36 hrs
Unit 11: Respiratory System	17 hrs	Unit 11: Medical Terminology & Abbreviations	36 hrs		
Unit 12: Digestive System	17 hrs	Unit 12: Healthcare Provider Skills	36 hrs		
Unit 13: Urinary System	14 hrs	Unit 13: Career & Technical Student Organization	36 hrs		
Unit 14: Lymphatic/Immune System	7 hrs				
Unit 15: Endocrine System	7 hrs				
Unit 16: Reproductive System	14 hrs				
Unit 17: Medical Terminology & Abbreviations	36 hrs				
Unit 18: Healthcare Provider Skills	36 hrs				
Unit 19: Career & Technical Student Organization	36 hrs				

# WELDING

**PDE CIP 48.0508**

Instructor - Dennis Whysong  
densong@bedfordctc.org

Instructional Aide - Teri Waltman  
twaltman@bedfordctc.org



The Welding program prepares individuals to apply technical knowledge and skills in Shielded Metal Arc Welding, Gas Metal Arc Welding, Gas Tungsten Arc Welding, Flux Core Arc Welding, brazing, Plasma Arc Cutting, and Oxy-fuel cutting. Hand, semi-automatic and automatic welding processes are also included in the instruction. Students learn workplace safety practices, types/uses of electrodes, welding rods, study of the physical and chemical behavior of metallic properties of metals (metallurgy); blueprint reading; electrical principles; welding symbols; use of equipment for testing welds by non-destructive methods and destruction and hardness testing; use of portable grinders; positioning and clamping; use of manuals and specification charts; and welding standards established by the American Welding Society.

## Industry Certifications

- American Welding Society
  - SMAW-3G Vertical
  - GMAW-1G Flat
  - GMAW-2G Horizontal
  - GMAW-3G Vertical
- OSHA 10 General
- SP/2 Welding
- NOCTI - Welding (4272)

## Courses of Study

- Shielded Metal Arc Welding
- Gas Metal Arc Welding
- Gas Tungsten Arc Welding
- Flux Core Arc Welding
- Brazing
- Plasma Arc Cutting
- Oxy-Fuel Cutting

## Career Opportunities

- Welders
- Welding Technicians
- Welding Supervisors
- Welding Inspectors
- Quality Assurance and Non-Destructive Testers
- Welding Estimator
- Repair Technicians
- Construction Welders
- Industrial/Production Welding
- Welders Helpers
- Welding Sales and Services Representatives.

**Average Wage - \$21.10/hr.**  
**(2021 - Pa. Dept. of Labor)**

## Class Requirements

Protective Shoes/Boots  
Additional Safety Glasses

## Postsecondary Articulations & Opportunities

BCTC's Automotive Technology program has local agreements for the student to earn free credits to continue his/her education:

**University of Northwestern Ohio**  
**Triangle Tech**

**Rosedale Technical College**  
**Pa. Highlands Community College**

BCTC Students may also qualify for statewide articulations through the SOAR Program. Those educational institutions are:

**Harrisburg Area Community College**  
**Delaware County Community College**  
**Northampton Co. Area Comm. College**  
**Greater Altoona Career & Technology**

**Community College of Allegheny**  
**Westmoreland Co. Comm. College**  
**Thaddeus Stevens College of Tech.**  
**Johnson College**

For more information about this program or other programs at the  
Bedford County Technical Center, please visit [www.bedfordctc.org](http://www.bedfordctc.org)  
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# Welding Technology Scope & Sequence

## 3 Years (1080 hours)

Year 1		Year 2		Year 3	
Unit 1: Occupational Orientation and Safety	30 hours	Unit 1: Occupational Orientation and Safety	30 hours	Unit 1: Occupational Orientation and Safety	30 hours
Unit 2: Principles of Welding	20 hours	Unit 2: Visual Examination, Inspection, and Testing	40 hours	Unit 2: Visual Examination, Inspection, and Testing	40 hours
Unit 3: Welding, Drawing, and weld symbol interpretation	30 hours	Unit 3: Welding, Drawing, and weld symbol interpretation	30 hours	Unit 3: Welding, Drawing, and weld symbol interpretation	30 hours
Unit 4: Shielded Metal Arc Welding	100 hours	Unit 4: Shielded Metal Arc Welding	50 hours	Unit 4: Shielded Metal Arc Welding	40 hours
Unit 5: Gas Metal Arc Welding	100 hours	Unit 5: Gas Metal Arc Welding	100 hours	Unit 5: Gas Metal Arc Welding	100 hours
Unit 6: Manual Oxyfuel Gas Cutting	30 hours	Unit 6: Flux Cored Arc Welding	40 hours	Unit 6: Flux Cored Arc Welding	40 hours
Unit 7: Mechanized Oxyfuel Gas Cutting	30 hours	Unit 7: Gas Tungsten Arc Welding	50 hours	Unit 7: Gas Tungsten Arc Welding	60 hours
Unit 8: Manual Plasma Arc Cutting	20 hours	Unit 8: Manual Plasma Arc and Air Carbon Arc Cutting	20 hours	Unit 8: Manual Plasma Arc and Air Carbon Arc Cutting	20 hours

# Non-Traditional Students

**General Description:** As a Career and Technical Education Institution, the Bedford County Technical Center strives to offer its students a variety of unique opportunities. One such opportunity is the Non-Traditional student program. Through this program, students are offered career and classroom support as well as free tools and equipment when they enroll in specific programs at the school.

## Eligible Programs

### Female Students

Female students can participate in the Non-Traditional Students program by enrolling in one of the following courses:

**Automotive Technology**  
**Building Construction**  
**Welding**

### Male Students

Male students can participate in the Non-Traditional Students program by enrolling in the following course:

**Cosmetology**

## Externship Opportunities

Cooperative Education Coordinator: Rock Manges

[rockem@bedfordctc.org](mailto:rockem@bedfordctc.org)  
814-623-2760 ext. 4820

**General Description:** Are you interested in earning a paycheck while earning grades? Cooperative education adds a paid career-based learning component to the student's training program. Participation in the Cooperative Education allows the employer and BCTC to work together to meet the training needs of eligible students. Seniors in their second or third year at BCTC are eligible for Cooperative Education and will attend BCTC one session every other week and report to their job sites for the rest of the week. In all cooperative education placement arrangements, the employment must be related to the student's vocational course of study. Students must maintain a C grade average, have good attendance, and be able to provide their own transportation to and from the job site. Employers give grades based on the students on-the-job performance. Students in the program are also required to keep a logbook, time sheets, and wage records. Students participating in an externship must meet jobsite specific industry requirements, and the employer must meet the PA state clearance requirements.



## **Job Shadowing**

BCTC encourages first and second year students to complete at least six hours of job shadowing experience. Job shadowing gives students a chance to work with an on-site mentor, ask questions, and learn more about the career in which they are interested

## **Internships**

BCTC offers students an opportunity to gain valuable work experience in their technical course of study through internships. Students will visit their selected job site for two to three days a week for a specified period of time. Although internships are unpaid work, the experiences they provide help guide students in making important career decisions that may lead to further education or future employment opportunities.

## **Clinical Experience**

Students enrolled in Health Assisting and Cosmetology may have an opportunity for a clinical experience. These are career-related experiences and are provided by hospitals, long-term care facilities, and in-house cosmetology clinical. The duration of clinical experience is determined by state certification regulations and the facility providing the career-related training. Students must meet all of the requirements of the clinical sites to participate in a clinical rotation. These requirements are determined by the individual clinical sites and may include health, safety, and state clearances.

## **Non-Discrimination Policy**

The Bedford County Technical Center does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs or activities. The Bedford County Technical Center affirms that all employment practices will be done in adherence to Title IX of the Educational Amendments of 1972, Title VI and VII of the Civil Rights Act of 1964, and Section 504 of the Rehabilitation Act of 1973. We further affirm that all curriculum offerings and student enrollment practices will be handled without discrimination based on sex, age, race, color, religion, national origin, or non-job related handicaps or disabilities. Inquiries may be directed to: Title IX Coordinator at 195 Pennknoll Road, Everett, PA 15537 or at (814) 623-2760 ext. 4800 or [modell@bedfordctc.org](mailto:modell@bedfordctc.org).





**195 Pennknoll Road  
Everett, PA 15537  
(814) 623-2760  
[www.bedfordctc.org](http://www.bedfordctc.org)**