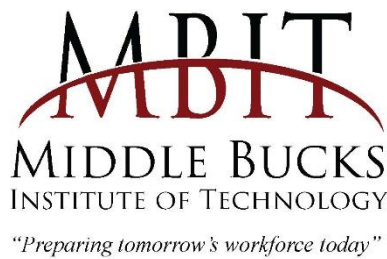


2020-2021 Program of Studies





Dear Parents and Guardians:

Allow me to introduce you to Middle Bucks Institute of Technology (MBIT). As a campus of your school district, your student has the unique opportunity to get a jump start on their career by enrolling in one of our twenty-two career and technical programs, **tuition free**, while in high school. Students across America are recognizing the importance of developing a technical foundation along with academic skills. MBIT continues to be at the forefront of preparing students for greater success in college and the increasingly competitive workforce.

So you may acquaint yourself with our Career Pathways I am enclosing for your review, a Middle Bucks Program of Studies for the 2020-2021 school year. Please take this opportunity to learn more about our twenty-two career & technical programs.

Students who are choosing to attend MBIT will use their electives and realize such benefits as:

- ✓ Earning industry recognized certifications
- ✓ Earning college credits through numerous articulation agreements with colleges & universities
- ✓ Confirming their desired career pathway
- ✓ Securing a solid plan to ensure multiple opportunities for employment in a competitive economy

I encourage your student to explore Middle Bucks Institute of Technology to discover their interests and feel empowered to choose the educational pathway that can lead to success in their desired career. The best way to fully understand all that Middle Bucks has to offer is to plan to attend our school-wide **Open House on Thursday, November 21, 2019 from 6:00 p.m. to 8:00 p.m.** There will be three information sessions in the Cafeteria for prospective students and their parents to meet with our School Counselors at 5:00, 6:00 and 7:00 p.m.

Whether your student's plan is to pursue college, the military, the workplace or any combination of these endeavors... remember they will need to have a plan, set goals, and be passionate about what they do. Middle Bucks Institute of Technology provides a wonderful opportunity for your student to use the knowledge and experiences gained from our school to be successful.

Please take this opportunity to help secure your child's future.

Sincerely,

A handwritten signature in cursive script that reads "Kathryn Strouse".

Kathryn Strouse
Administrative Director

Mission Statement

Preparing tomorrow's workforce today

Discover all that MBIT has to offer by visiting our website

www.mbit.org



You can also learn more by following MBIT on social media.



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YOUR CAMPUS AT MIDDLE BUCKS INSTITUTE OF TECHNOLOGY

Middle Bucks Institute of Technology (MBIT) is located in Warwick Township on York Road (Route 263) in Jamison, Pennsylvania. The picturesque high school campus sits on 58 acres and is supported by Centennial, Central Bucks, Council Rock, and New Hope-Solebury School Districts. Middle Bucks Institute of Technology operates as a school of choice designed for students who are seeking to enhance their educational program with a highly relevant career and technical experience connected directly to the real world of business and industry. Over 400 business and industry advisors review and update the school's educational program annually. The MBIT experience provides students with a blend of classroom theory, technical applications in state-of-the-art laboratories, and off-campus work-based experiences. Students learn and apply reading, writing, mathematics, science, communications, and technology in a way that has personal meaning and career relevance.

The educational program is organized around five broad career pathways and offers twenty-two state approved career pathway programs. Approximately 850 students attend the daytime program. In addition to secondary students, the school clientele includes approximately 500 adults who are enrolled in daytime, evening, and customized industry training programs. The school operates fall and spring sessions, with a summer enrichment program for middle school students. The staff consists of approximately thirty-five professional educators and thirty support personnel. Instruction is individualized, self-paced, and highly personalized.

Middle Bucks Institute of Technology prepares today's students for tomorrow's emerging technologies and provides students with the competitive edge needed for employment in a global marketplace and success in college.

APPLICATION AND SELECTION PROCESS

Students must complete the MBIT application process in order to be considered for admission. Selection is based on completion of selected program recommendations, aptitude and achievement scores, interest inventories, attendance records, behavior patterns, emotional stability, academic achievement, and a personal essay. Students are accepted based on the aforementioned variables and a quota system by district. Since many programs fill to capacity quickly, students should begin the application process early to ensure that a completed application package is on file at MBIT by **March 15th of the year prior to enrollment**. However, applications will be accepted anytime throughout the year. Applications may be obtained within this Program of Studies, from your School Counselor, on the MBIT website at www.mbit.org, through our InfoSnap system, or by calling Middle Bucks Institute of Technology at 215-343-2480.

To apply or obtain more information about secondary programs and services, contact the MBIT School Counselor at 215-343-2480 ext. 110. For more information about adult programs, contact the Adult Education Coordinator at 215-343-2480 ext. 108. You can also visit our website at www.mbit.org.

PROGRAM COSTS

Students are responsible for an activity fee, lab fees (where applicable), tools, supplies, and clothing for their program. The approximate costs associated with each program are listed under the "Program Requirements/Estimated Costs" section of each course description.



The mission of **SOAR (Students Occupationally and Academically Ready)** is to prepare students for college and careers in a diverse, high-performing workforce. SOAR is the career and technical Program of Study (POS) educational plan that articulates the secondary career and technical programs to postsecondary degree, diploma, or certificate programs. SOAR programs prepare today's students for High Priority Occupations (HPO) which include career categories that are in high demand by employers, have higher skills needs, and are most likely to provide a family sustaining wage.

Upon the successful completion of the required academics and technical competencies earned at MBIT, POS students may qualify for several free credits in their major at participating colleges across Pennsylvania. SOAR programs offer qualifying students advanced credit(s) with partnering postsecondary institutions in aligned CTE programs. To learn more about advanced college credit opportunities articulated with postsecondary institutions, go to the equivalency search results at www.CollegeTransfer.net.

COLLEGE AND UNIVERSITY CONNECTIONS

Middle Bucks Institute of Technology has a variety of college and university connections available to students including career pathway articulation agreements. Articulation agreements provide college advanced credits and are in place with many postsecondary institutions including, but not limited to, Bucks County Community College, Culinary Institute of America, Delaware Valley University, Gwynedd Mercy University, Bloomsburg University, and Pennsylvania College of Technology. Students can earn from six to twelve credits toward an associate's degree, bachelor's degree, or certification at these or other postsecondary institutions. See each career pathway description for specific college connections.

Articulation Agreement Benefits:

- Save money on college tuition
- Save time by shortening college attendance
- Get on the right career pathway
- Enter the job market ready
- Receive a consistent, seamless education



CAREER ASSESSMENT

Career assessment services are intended to help secondary students and adults make a career decision by identifying their technical aptitudes and interests, and are available at no charge to secondary students in each of the four sending districts. A testing center has been created at MBIT with staff trained in test administration and analysis. For more information or to have your child tested, please contact either your child's School Counselor or MBIT's Programs and Services Assistant at 215-343-2480 ext. 218.

FLEXIBLE SCHEDULING OPTIONS

Middle Bucks Institute of Technology attempts to accommodate the scheduling needs of all students through a flexible range of options. The school day at MBIT is divided into two sessions: A session (7:45 a.m. to 10:25 a.m.) and B session (11:30 a.m. to 2:15 p.m.). Each session is divided into two 80-minute periods for a total of four periods per day. Session assignments are made by MBIT staff based on each student's educational or achievement level. Most students schedule their educational program at MBIT for two periods (2 hrs. 45 mins.) per day. While our programs are designed to be completed in three years, students with a specific goal may attend for one semester (18 wks.) or one year (36 wks.). If a student's academic schedule does not accommodate any of these options, every attempt will be made to customize a schedule to fit an individual student's unique situation.

ACADEMIC COURSEWORK

All students are expected to schedule a rigorous sequence of academic courses to support their MBIT program and plan for a strong academic foundation. This foundation is necessary to prepare students for success in college and/or career advancement. The specific sequence of science, math, english, and social studies should be discussed with the School Counselors at your participating school.

ADVANCEMENT AND PROMOTION

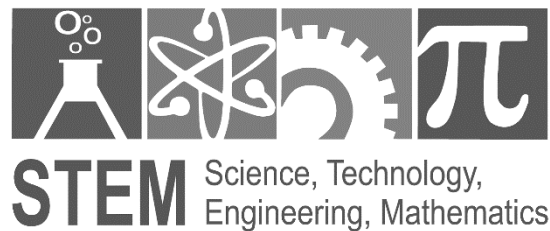
Instruction in all programs at MBIT begins with establishing a core technical foundation of knowledge and skills. The sequential curriculum enables students to build on the foundation of skills established in one level and progress to the next or advanced level. Consequently, students are expected to make continuous and satisfactory progress each year before advancing to the next progressive level. Students mastering a significant number of competencies (e.g., 70%) for their assigned level and achieving a final grade of C or better shall be promoted to the next progressive level the following year. Students unable to achieve this benchmark standard shall be rescheduled into the same level the next year should they consider continuing in the same major field of study. Students who are unable to achieve a minimum standard of 25% task completion or who receive a final grade of F will be required to consider other educational options.

Furthermore, students are expected to supplement their technical program with a thorough sequence of academic courses at their high school. For most students, this constitutes a minimum three (3) years of academic math, four (4) years of academic english, and two (2) years of lab science. Failure to satisfactorily complete a rigorous academic sequence of courses will jeopardize a student's ability to continue in their program of study at MBIT.

STEM ACROSS THE CURRICULUM PROGRAMS

Most of the twenty-two Career and Technical programs at Middle Bucks Institute of Technology are aligned to the STEM disciplines and specific STEM careers. For example, students learn about new, innovative medicine, treatment, medical devices, medical technology and diagnostic tools in the Science & Health Career Pathways. Students prepare for careers in graphic or web design, video production, fiber optics and other diverse industries within the Arts & Communication Career Pathways. Students not only learn about the automotive industry, but also about transportation infrastructure planning and management in the Engineering & Industry Technology Career Pathways.

Even those Career Pathways not immediately associated with STEM can help prepare students for careers in the STEM field. For example, students in the Business Finance & Information Technology Career Pathway gain skills such as strategies for analyzing information, understanding digital forensic methodology and the ability to defend computer networks, which are all skills that could transfer to a STEM-focused business. Or, students in the Public Safety program can learn about science and technology policy, intellectual property and patents, public health issues, and how to conduct statistical analyses to evaluate a policy or program through the Human Services Career Pathway. All of these skills have grounding in the basic STEM competencies, and have a direct application of knowledge of science, technology, engineering and/or mathematics.



STEM Career Pathways and Sample Careers:

Arts & Communication	Business Finance & Information Technology	Engineering & Industry Technology	Human Services	Science & Health
Graphic Designer	Network Administrator	Collision Technician	State Police Officer	Registered Nurse
Video Producer	Web Designer	Welder	Preschool Teacher	Microbiologist
Video Systems Engineer	3-D Animator	Mechanical Engineer	Executive Chef	Occupational Therapist

Pennsylvania Department of Education's Career Pathways

Students will be introduced to and participate in activities and experiences focusing on the following five pathways:

Arts and Communication

- Careers in this pathway are related to humanities and performing, visual, literary, and media arts. These include graphics, interior and fashion design, writing, film, fine arts, journalism, languages, media, advertising, and public relations.
- If you are a creative thinker, imaginative, innovative, and original this may be the career path for you!

Business Finance and Information Technology

- Careers in this pathway are related to the computer and business environment. These include entrepreneur, sales, marketing, computer/information systems, cyber security and management.
- If you enjoy being a leader, problem solving, interacting with people, planning and design activities, working with technology then a career in business may be right for you.

Engineering and Industry Technology

- Do you enjoy working with your hands, building and fixing things? Would you describe yourself as practical and logical? Are you interested in studying science, drafting, robotics, woodworking or math? In your free time, do like to use technology, work on cars or mechanical things? If you answered yes to some of these questions, then a career in Engineering and Industry Technology might be right for you.
- Careers in this pathway of study are related to the technologies necessary to design, develop, install or maintain physical manufacturing systems. These may include engineering and related fields, architecture, mechanics and repairers, manufacturing technology, precision production, electronics and construction trades and related industries.

Human Services

- Are you able to be flexible and adapt quickly, and to make quality judgments under stressful situations? Do you like working with diverse groups of people and serving the public? Do you possess emotional stability and strong self-esteem? This may be the career pathway for you!
- Careers in this pathway appeal to people who enjoy interacting with other people and who are interested in helping people solve their problems.

Science and Health

- Consider the Health Services pathway if you have a curiosity about medical problems and advances, a concern for physical and mental fitness, an aptitude in science, math and social studies, an aptitude for working with computers, desire to work in hospitals, clinics or health and wellness facilities.
- People attracted to careers in this pathway like to work with people. This career path includes programs related to medicine, dentistry, nursing, therapy and rehabilitation, nutrition, fitness, and hygiene.

COMMERCIAL ART & ADVERTISING DESIGN

Instructor: **Bradley Rosenau**

CIP Code: 50.0402

This program in the visual arts prepares serious art students how to visually communicate ideas and information to inform, entertain or persuade business and consumer audiences by using graphics and illustrations for print or digital media. Using a project based approach, students gain experience simulating real world projects that support an understanding of the broad range of careers in visual design.

Animation is taught using **Adobe Character Animator, Animate, and After Effects** to learn the basics of digital animation. Students learn rotoscoping, tweening, basic motion capturing and adding audio and special effects to videos. Digital Imaging & Digital Photography is taught using the latest state of the art versions of **Adobe Creative Suite** software. MBIT art students are well prepared for college and careers in the visual arts. **Photoshop, Illustrator, InDesign, and Lightroom** are all used in assignments emphasizing the use of the computer to draw and design. It is essential for today's commercial artist to be able to create and manipulate digital images to industry standards. Students learn Advertising Design elements & principles of visual design and composition that are incorporated in any piece of commercial or fine art. Students take their ideas from quick sketches to a finished pre-press level making packages, direct mail, brochures, publications (both print and eBooks), posters & flyers, print ads and more. **Typography**, the study of the history and anatomy of the written word in communication is taught so students learn different type styles and font families; projects will include logo design, sign making, type spacing. Students learn **Drawing & Illustration** by working in a variety of media including: pencils, inks, markers, watercolors and acrylics. Students will practice different techniques in both black and white and color. Units of study include technical drawing, human anatomy, portraiture, cartooning, observational and editorial illustrations.

AVAILABLE INDUSTRY CERTIFICATIONS

Adobe Certified Associate Illustrator
 Adobe Certified Associate InDesign
 Adobe Certified Associate Photoshop
 Adobe Certified Associate Animate

COLLEGE ADVANCED CREDITS

Bucks County Community College
 Harcum College
 Harrisburg University of Science & Technology
 Hussian College
 Pennsylvania College of Art & Design

PROGRAM RECOMMENDATIONS

Basic computer skills
 Color perception
 Creative/artistic ability
 Knowledge of geometric concepts and spatial relationships
 Mathematics fundamentals, including linear measurements
 Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Uniform (approximately \$30)
 Portfolio (approximately \$20)



CAREER PATHWAYS:

Desktop Publishing

Illustrator

Graphic Designer

Animator

Sign Maker

Photographer's Assistant

Industrial Designer

Web Page Designer

Typographer

Advertising Artist

Print Shop Assistant

Silk Screen Printer



MULTIMEDIA TECHNOLOGY

Instructor: **James Davey**

CIP Code: 10.9999

This program introduces students to the art and science of multimedia technology. Through a mix of classroom instruction and hands-on experience, students will be well prepared for success in today's rapidly growing communication fields. They gain a working knowledge of hardware, software, and equipment necessary for delivering effective communication for business, education, and entertainment. Rigorous instruction motivates students to develop competency in photography, cinematography, concept design, graphic design, television production, streaming video and audio production, as well as electronic computer imaging, motion graphics, and animation using Apple computers. In addition, curriculum is implemented through iOS devices and collaborative processes along with real-world experiences. A variety of software applications are taught including: **Adobe Premiere Pro, Audition, Animate, Photoshop, Illustrator, and After Effects, as well as Blackmagic Davinci GarageBand, Word, Excel, PowerPoint.** Using advanced digital technology, students apply their knowledge and skills to create professional media for broadcast, corporate communications, web-based content and entertainment. Students also receive instruction in internet technology, social media and the development of multi-touch textbooks. This course provides comprehensive hands-on experience with the internet through instruction in website development, project management, budgeting, and social networking. This program will enhance computer literacy, build communication skills and yield work samples for an impressive portfolio in preparation for college and employment.



CAREER PATHWAYS:

Video Producer/Director

Audio Engineer Editor

Video Camera Operator

Animator

Photo Journalist

Photographer

Director of Photography

Lighting Director/ Designer

Script Writer/ Broadcast Writing

Video Editor

Graphic Designer

Video Systems Engineer

AVAILABLE INDUSTRY CERTIFICATIONS

Adobe Certified Associate -Visual Communication
Apple Certified Pro
Adobe Premiere

COLLEGE ADVANCED CREDITS

Bucks County Community College
Community College of Philadelphia
Manor College
Montgomery County Community College

PROGRAM RECOMMENDATIONS

Ability to work independently
Basic computer skills
Collaborative/group work
Creative/artistic ability
Effective written and oral communication skills
Manual dexterity
Mathematics fundamentals
Physical stamina
Read and interpret technical material at grade level
Strong depth and color perception

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$30)
Computer supplies and educational materials (approximately \$60)



STEM ACROSS THE CURRICULUM PROGRAM

NETWORKING & OPERATING SYSTEMS SECURITY

Instructors: **Michael Esposito and Thomas Omerza**

CIP Code: 11.0901

This **CompTIA Authorized Academy** offers students the opportunity to study a variety of topics, including **Microsoft Windows Operating Systems**, in which students will obtain the knowledge and skills necessary to install, configure, administer, and support the primary services of **Microsoft Windows Server** operating systems; **CompTIA A+ certification**, an international, vendor-neutral certification, which validates the latest skills needed by today's computer support professionals; **CompTIA Network+** certification, which allows students to learn the technology and theory behind local area networks (LAN) through design and implementation; and **CompTIA Security+** certification, which introduces students to industry-wide topics including communication security, infrastructure security, cryptography, access control, authentication, external attacks, and operations and organizational security. Students will further be introduced to virtual computing and its uses throughout the computer industry, as well as computer forensics, a branch of forensic science pertaining to legal evidence found in computers and digital media storage. In addition, students will learn about network cabling technology, including: copper cabling systems, connectors, grounding, bonding, electrical protection, termination functions, and safety. Lastly, students are introduced to the digital environment. This program provides an excellent foundation of technical knowledge for college and/or direct employment.



CAREER PATHWAYS:

- Computer Forensics Examiner
- Network Administrator
- Network Consultant
- Technology Coordinator
- Technical Support Specialist
- Network Specialist
- Data Security Specialist
- Network Architect / Engineer
- Communications Specialist
- Data Recovery Specialist
- Information Security Analyst
- Computer Systems Analyst

AVAILABLE INDUSTRY CERTIFICATIONS

Certified Data Recovery Professional
 CompTIA A+, Network+, and Security+
 Microsoft Certified Solutions Associate for Windows 7, 8, 8.1, and 10
 Microsoft Certified Solutions Associate for Windows Server 2008, 2012 and 2016
 Office 365

COLLEGE ADVANCED CREDITS

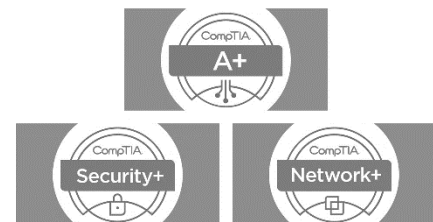
Bucks County Community College
 Community College of Philadelphia
 Delaware County Community College
 Harrisburg Area Community College

PROGRAM RECOMMENDATIONS

Algebra 1
 Basic computer skills
 Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$25)
 Industry certification testing fees (approximately \$130 per test)
 Textbooks (approximately \$195 to begin student's professional library)



STEM ACROSS THE CURRICULUM PROGRAM

WEB DESIGN & INTERACTIVE MEDIA

Instructor: **Steven Guinan**

CIP Code: 11.0801

Students enrolled in this program will participate in an exciting program of study exploring computers in internet-based technologies. This class is for students who want to learn about the current technology in web applications. Students will learn advanced skills in photo editing using **Adobe Photoshop**, animation using **Adobe Animate**, multimedia using **Adobe Premier**, and web design editing using **Adobe Dreamweaver**. Adobe is the leading provider of state-of-the-art industry standard software. Students walk away from this class with an extensive portfolio of digital imagery, web imagery, and multimedia animations. In addition, students will have the opportunity to learn coding techniques and development using **HTML and CSS**. HTML is the language of the web and the foundation for building websites. Students also study programming languages and scripting languages to create dynamic web pages. Throughout the course, students create and design websites for a variety of clients in the community. Additional instruction includes: internet theory, web page standards and policies, elements of web page design, user interfaces, vector tools, special effects, interactive and multimedia components, search engines, navigation, morphing, gaming, e-commerce tools, and emerging web technology. This program provides an excellent foundation of technical knowledge for college and/or direct employment.



CAREER PATHWAYS:

Information Technology Specialist

Web Applications Developer

Website Designer

Game Developer

Web Developer

E-marketing Specialist

Information Systems Manager

Animation Developer

Communications Specialist

Graphic Designer

Database Specialist

Software Trainer

AVAILABLE INDUSTRY CERTIFICATIONS

Adobe Certified Associate in Dreamweaver, Photoshop, Animate, and Illustrator
Microsoft Office Specialist in Word, PowerPoint, Access and Excel

COLLEGE ADVANCED CREDITS

Bucks County Community College
Delaware County Community College
Harrisburg Area Community College

PROGRAM RECOMMENDATIONS

Algebra 1
Basic computer skills
Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Industry certification testing fees (approximately \$60 per test)
Textbooks (approximately \$150 to begin student's professional library)



STEM ACROSS THE CURRICULUM PROGRAM

AUTOMOTIVE TECHNOLOGY

Instructors: **Paul Ciarlone and Robert Schwarz**

CIP Code: 47.0604

This nationally recognized **Automotive Service Excellence/National Automotive Training Education Foundation (ASE/NATEF)**, and the **Pennsylvania Department of Transportation (PennDOT)** accredited instructional program prepares students to engage in the diagnosis, servicing, and maintenance of all types of automobiles. The Automotive Technology program has also been recognized by the **Motor Vehicle Manufacturers Association (MVMA) Advisory Council and the Association for Career and Technical Education (ACTE)**. Instruction is provided in the diagnosis, repair and maintenance of engines, automatic transmissions/transaxles, manual drive trains and axles, suspension and steering systems, brake systems, electrical systems, heating and air conditioning systems, and engine performance. Graduates of this program will be qualified to enter the automotive field as an entry-level service technician in new car dealerships or related automotive businesses. The Automotive Technology program also provides an excellent foundation from which to pursue a two-or four-year college degree.



CAREER PATHWAYS:

- Automatic/Manual Drive Train Tech.
- Service Station Proprietor
- Parts Specialist/Manager
- Insurance Claims Adjuster
- Corporate Trainer
- Brake Systems Specialist
- Master (ASE) Service Technician
- Front-end Alignment Technician
- Tire, Wheel & Suspension Specialist
- Engine Performance Specialist
- AC & Heating Specialist
- Service Adviser/Manager



AVAILABLE INDUSTRY CERTIFICATIONS

AC Delco Battery Starting and Charging System
AC Delco Electrical State 1 & 2
ASE Student Certificates
PA Certified Emissions Inspector
PA Certified Safety Inspector, Category I
S/P2 Certificates for Safety and Pollution
Section 609 Certification for Refrigerant Recycling and Recovery
Valvoline Motor Oil Certificate

COLLEGE ADVANCED CREDITS

Bucks County Community College
Community College of Philadelphia
Delaware County Community College
Harrisburg Area Community College
Lincoln Technical Institute
Northampton Community College

PROGRAM RECOMMENDATIONS

Ability to work in cramped spaces and awkward positions
Effective analytical and critical thinking skills
Aptitude for mechanical and scientific theory
Effective oral comprehension
Hand-eye coordination
Mathematics fundamentals including: arithmetic, algebra, and geometry
Read and interpret technical material at grade level
Understanding of electronics and computers

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$100)
Textbooks and lab manuals (approximately \$25)
Industry certification testing fees (approximately \$120)

STEM ACROSS THE CURRICULUM PROGRAM

BUILDING TRADES OCCUPATIONS

Instructor: **Michael Sykes**

CIP Code: 46.0401

This national recognized Residential Construction Academy (RCA) accredited instructional program, in conjunction with the **National Association of Home Builders** (NAHB) and the **Home Builders Institute** (HBI), prepares students for career paths and employment opportunities in the construction industry through technical knowledge and skills in the building, repair, and general maintenance of residential building and other structures. The program provides instruction in many of the construction trades including: structural carpentry, finish carpentry, millwork, plumbing, electricity, masonry, concrete, tile setting, installing hardware, heating, ventilation, waterproofing, roofing, siding, drywall, painting, regular tool and machine maintenance, environmental control systems, and record keeping. Students learn to use hand and power tools, construction materials, estimating, blueprint reading, and construction safety. Graduates of this program are prepared for employment in construction fields or may pursue specialized training through an apprenticeship and/or postsecondary education.



CAREER PATHWAYS:

- Carpenter
- Construction Supervisor
- Electrician's Assistant
- Block Mason
- Plumber's Assistant
- Ceiling Tile Installer
- Drywall Installer & Finisher
- Tile & Marble Setter
- Painter
- Roofing & Siding Installer
- Facility Manager
- General Contractor

AVAILABLE INDUSTRY CERTIFICATIONS

American Ladder Institute Safety Training
 OSHA 10 Hour Safety
 PBA Skills Certificate
 Residential Construction Academy National Registry

COLLEGE ADVANCED CREDITS

Bucks County Community College

PROGRAM RECOMMENDATIONS

Ability to adhere to strict safety regulations
 Ability to work in teams
 Ability to work in various weather conditions
 Easily adapts to multiple skill set disciplines
 Hand-eye coordination
 Mathematics fundamentals
 Physical stamina
 Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$75)
 OSHA 10 Hour Safety (approximately \$25)
 Tool belt and selected tools (approximately \$150)

STEM ACROSS THE CURRICULUM PROGRAM



COLLISION REPAIR TECHNOLOGY

Instructors: **Mark Lance**

CIP Code: 47.0603

This nationally recognized **Automotive Service Excellence/National Automotive Training Education Foundation (ASE/NATEF)** accredited instructional program prepares students to perform: structural analysis and damage repair, non-structural analysis and damage repair, mechanical and electrical components, plastics and adhesives, and painting and refinishing. Furthermore, this program utilizes the industry standard I-CAR curriculum. The Collision Repair Technology program has also been recognized by the **Motor Vehicle Manufacturers Association (MVMA) Advisory Council and the Association for Career and Technical Education (ACTE)**. The program prepares students to perform various duties from repairing small dents to rebuilding the bodies of wrecked or damaged vehicles made of both Steel and Aluminum metals. Students learn industry relevant skills including: examining damaged vehicles and estimating costs of repairs, removal, repair, and replacement of body panels, accessories, electrical and hydraulic devices, grills, trim, automotive glass, and unibody straightening. Refinishing processes and spray painting techniques are taught in a controlled-atmosphere downdraft spray booth according to industry standards. Waterborne paint technology is taught as part of the industry's efforts to be more environmentally friendly. Students will participate in a shadowing experience with **Thompson Collision Center** and will be prepared to enter the auto body and collision industry as entry-level technicians or pursue an associate or baccalaureate degree in collision related fields, including automotive restoration technology.



CAREER PATHWAYS:

- Body Shop Proprietor
- Collision Technician
- Refinisher/Painter
- Frame Straightener
- Upholsterer
- Paint Representative
- Parts Supplier
- Insurance Adjuster
- Collision Estimator
- Windshield /Glass Installer
- Sheet Metal Technician

AVAILABLE INDUSTRY CERTIFICATIONS

- AC Delco Battery Starting and Charging System
- AC Delco Electrical State 1 & 2
- ASE Student Certificates
- S/P2 Certificates for Safety and Pollution Prevention
- Section 609 Certification for Refrigerant Recycling and Recovery
- Valvoline Motor Oil Certificate

COLLEGE ADVANCED CREDITS

- Bucks County Community College
- Pennsylvania College of Technology

PROGRAM RECOMMENDATIONS

- Adhere to strict safety regulations
- Color and size perception
- Effective organizational skills
- Hand-eye coordination
- Mathematics fundamentals, including linear and liquid measurements
- Physical stamina
- Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

- Appropriate uniform attire and equipment (approximately \$150)
- Industry certification testing fees (approximately \$54)



STEM ACROSS THE CURRICULUM PROGRAM

COMPUTERIZED DRAFTING & ENGINEERING GRAPHICS

Instructor: **Craig Malinowski**

CIP Code: 15.1301

This nationally recognized, **American Design Drafting Association (ADDA)** accredited instructional program prepares students in the areas of: planning, preparing and interpreting mechanical, architectural, structural, civil GPS, electrical/electronic, topographic, piping, tool and die, and other drawings. Instruction is provided in manual pencil drafting and Computer-Aided Design (CAD) techniques using the latest versions of **AutoCAD, Autodesk Revit, Solidworks, and Google Sketchup** software packages. Instruction in the use of reproduction materials, equipment and processes, development of detailed drawings and **3D solid modeling** is provided. This program meets industry standards through curriculum, professional development and state-of-the-art equipment. Students complete an architectural house project, which includes working drawings, specifications, 3-dimensional perspective rendering, and a scale model. Each student develops a professional portfolio. This program is designed for students who plan to pursue an associate or baccalaureate degree in engineering or architecture.



CAREER PATHWAYS:

- Structural Engineer
- Architect
- Mechanical Engineer
- Project Manager
- Estimator
- Technical Draftsperson
- Specifications Writer
- CAD Operator
- Architectural Draftsperson
- Mechanical Draftsperson
- Fire Sprinkler Draftsperson
- Civil Engineer

AVAILABLE INDUSTRY CERTIFICATIONS

ADDA Certified Drafter
OSHA 10 Hour Safety

COLLEGE ADVANCED CREDITS

Bucks County Community College

PROGRAM RECOMMENDATIONS

Basic computer skills
Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$12)
OSHA 10 Hour Safety (approximately \$25)

STEM ACROSS THE CURRICULUM PROGRAM



ELECTRICAL TECHNOLOGY

Instructor: **Randall McDowell**

CIP Code: 46.0399

This nationally recognized Residential Construction Academy (RCA) accredited instructional program, in conjunction with the **National Association of Home Builders** (NAHB) and the **Home Builders Institute** (HBI), prepares students with the skills and knowledge necessary for a career in the electrical industry. Through a blending of classroom theory and hands-on activities, this program provides an excellent foundation of technical knowledge for college and/or direct employment in the electrical field.

Upon completion of this program, students will have the ability to enter the electrical industry with experience highly sought after by local employers. Trained electricians can interpret blueprints, layout and design circuits, assemble, install and test electrical fixtures. They are also able to troubleshoot devices and circuits for proper operation and perform maintenance on various systems.

The program of study covers a variety of topics necessary for student success, including; lay out, assemble, install, operate, maintain, test and repair residential, commercial, and industrial systems, DC and AC motors, generators, transformers, controls, programmable logic controllers, electrical distribution panels, and installation and maintenance of service wiring, and distribution networks. Program instruction includes: reading and interpretations of commercial and residential construction wiring codes and specifications (e.g., **National Electrical Code**), single and three phase, delta and wye systems; both low (110 v. – 220 v.) and high voltages (440 v. and higher). Instruction emphasizes the application of mathematics, science, electron theory and Ohm's Law. Students will also receive instruction in green technology through our solar and wind power generation trainer.



CAREER PATHWAYS:

- Marine/Aviation Electrician
- Journeyman Electrician
- Electrical Inspector
- Electrical Draftsperson
- Maintenance Electrician
- Residential Electrician
- Electrical Control Technician
- Industrial Maintenance Mechanic
- Electro-mechanical Technician
- Security Systems Technician
- Network Cable Technician
- High Voltage Lineman

AVAILABLE INDUSTRY CERTIFICATIONS

American Ladder Institute Safety Training
C-Tech Introduction to Network Cabling in Copper Based Systems and Fiber Based Systems
OSHA 10 Hour Safety
PBA Skills Certificate

COLLEGE ADVANCED CREDITS

Bucks County Community College
Harrisburg Area Community College
Triangle Tech

PROGRAM RECOMMENDATIONS

Mechanical Aptitude
Color perception
Hand-eye coordination
Mathematics fundamentals
Physical stamina
Ability to work independently or with a team
Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$50)
OSHA 10 Hour Safety (approximately \$25)
Tool belt and selected tools (approximately \$100)



ENGINEERING RELATED TECHNOLOGY

Instructor: **Alan Ostrow**

CIP Code: 15.9999

This program provides the college-bound student with pre-professional experiences in the field of engineering and related technologies. Curriculum is enhanced through the use of state-of-the-art technology and **Amatrol Hands-On Learning Systems**. The Engineering Related Technology program is a rigorous sequence of courses that allows students to develop skills in engineering and engineering technology. Exposure to principles of engineering and introduction to engineering design will help students prepare to enter a two- or four-year college or technical school. The **Amatrol Systems** help the student understand the practical side of engineering related technology by utilizing hands-on skills. This project-based curriculum challenges students to use mathematical, scientific, and technological principles to solve real world problems. The broader Engineering Related Technology program curriculum consists of a series of courses that expose students to the various disciplines of engineering including: civil engineering, electrical and electronic engineering, design engineering, industrial, manufacturing, and mechanical engineering, chemical engineering, aerospace engineering, and computer and network engineering. Students will study electro-mechanical systems, robotics, electrical and electronic theory, thermal heat, and fluid and pneumatic power. They will learn to use a variety of engineering tools including: software applications for design, statistical and data analysis, project management, presentation, and reporting. In addition, students will use laboratory equipment for testing and measurement. Lastly, students will learn the problem-solving process, develop critical thinking skills, and work in teams.



CAREER PATHWAYS:

- Manufacturing Engineer
- Engineering Technician
- Engineering Graphics
- Industrial Engineer
- Aerospace Engineer
- Cost Analysis Specialist
- Quality Control Specialist
- Robotic Technology Specialist
- 3D Computer Modeling Specialist
- Mechanical Engineer
- Electrical Engineer
- Electro/Mechanical Technician

AVAILABLE INDUSTRY CERTIFICATIONS

OSHA 10 Hour Safety
SolidWorks

COLLEGE ADVANCED CREDITS

Bucks County Community College
Harrisburg Area Community College
Montgomery County Community College

PROGRAM RECOMMENDATIONS

Algebra 1
Laboratory science
Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

OSHA 10 Hour Safety (approximately \$25)
Lab coat (approximately \$40)
Lab supplies (approximately \$75)
Workbooks (approximately \$125)



STEM ACROSS THE CURRICULUM PROGRAM

HORTICULTURE, LANDSCAPE & DESIGN

Instructor: **Gregory Smith**

CIP Code: 01.0601

The Horticulture, Landscape & Design program prepares students for career and postsecondary pathways in major areas of the horticulture and landscaping industries. **Landscape Design** includes the knowledge and use of various deciduous and evergreen trees and shrubs, annual and perennial flowers, specimen plantings, and ornamental grasses. Students will learn to design using our LandscapePRO software. Students will understand the installation and maintenance process from the initial customer meeting to the completion of a project. **Hardscape Design** includes the planning and installation of interlocking paver patios and walkways, segmented retaining walls, masonry walls and stone veneer finishing, pond, waterfall, and low voltage lighting. **Turfgrass Establishment** includes the study of different turf grasses, soil classification and amendments, and seasonal turf maintenance. The safe operation of turf equipment including zero turn mowers and skid steer loaders is taught as well as small engine repair, standard and preventative maintenance, and industry safety. **Horticultural Operations** includes the study of greenhouse structures, irrigation, and environment required for healthy plant growth. Plant propagation, fertilization, and organic sustainability supports our students as they grow sustainable food crop throughout the academic year. **Hydroponics and Aquaponics Systems** includes implementation of sustainable methods for crop production. Students will also experience managing **Middle Bucks Gardens**, a student based enterprise, offering annuals, hanging baskets, organic vegetable and herb plants to the community during the spring growing season.



CAREER PATHWAYS:

- Independent Contractor
- Greenhouse Manager
- Greenhouse Manager
- Greenhouse Employee
- Landscape Installer
- Hardscape Installer
- Pond Installer
- Irrigation System Installer
- Nursery Foreman
- Nursery Field Supervisor
- Nursery Sales
- Maintenance Supervisor

AVAILABLE INDUSTRY CERTIFICATIONS

Pennsylvania Certified Horticulturist Associate
 OSHA 10 Hour Safety
 ICPI Paver Installer Pathway
 PA Pesticide Application
 PLANET Landscape Safety Training

COLLEGE ADVANCED CREDITS

Bucks County Community College
 Delaware Valley University

PROGRAM RECOMMENDATIONS

Ability to work in various weather conditions
 Effective written and oral communication skills
 Mathematics fundamentals
 Physical stamina
 Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

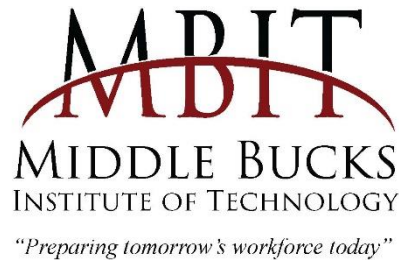
Activity fees (approximately \$50)
 Appropriate uniform attire (approximately \$50)
 OSHA 10 Hour Safety (approximately \$25)
 PLANET Landscape Safety Training (approximately \$45)
 ICPI Certified Installer Materials (approximately \$30)



STEM ACROSS THE CURRICULUM PROGRAM

Date Received by MBIT

Applicant's Name



2740 York Road, Jamison PA 18929
(215) 343-2480 Fax (215) 343-8626
www.mbit.org

A Campus of Centennial, Central Bucks, Council Rock,
and New Hope-Solebury School Districts

2020-2021
Academic Year
Application for Admission

APPLICATIONS ARE TO BE RETURNED TO THE MBIT SCHOOL COUNSELOR
THROUGH THE MAIL OR EMAILED AT APPLICATIONS@MBIT.ORG

The Middle Bucks Institute of Technology does not discriminate in its educational programs, activities, or employment practices, based on race, color, national origin, [sex] gender, sexual orientation, disability, age, religion, ancestry, union membership, gender identity or expression, AIDS or HIV status, or any other legally protected category. Announcement of this policy is in accordance with State Law including the Pennsylvania Human Relations Act and with Federal law, including Title VI and Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination in Employment Act of 1967, and the Americans with Disabilities Act of 1990. Inquiries may be directed to Middle Bucks Institute of Technology, Title IX Coordinator or Section 504 Coordinator at 2740 York Road, Jamison, PA 18929 or 215-343-2480.

SECTION I – TO BE COMPLETED BY PARENT/GUARDIAN

Directions: Please print clearly and complete all items in Section I.

Birth Date ____/____/____

Name: First _____ M.I. _____ Last _____

Address _____ Apt # _____ Parent/Guardian Home Phone (____) _____

City _____ Zip _____ Check (✓) please: _____ Male _____ Female

Current school you attend _____ Current Grade Level _____

Current School Counselor's Name _____

H.S. you will attend _____

Resident School District of Parent/Legal Guardian _____

1st Parent/Legal Guardian: _____
(Circle One) Name Relationship to Student

1st Parent/Legal Guardian contact information: _____
Daytime Phone Number E-mail address

2nd Parent/Legal Guardian: _____
(Circle One) Name Relationship to Student

2nd Parent/Legal Guardian contact information: _____
Daytime Phone Number E-mail address

*Address if different from above _____

Student lives with: Both Parents/Guardians 1st Parent/Guardian only 2nd Parent/Guardian only

SECTION II – TO BE COMPLETED BY APPLICANT

APPLICANT STATEMENT: In your own words, please explain in the space below why you would like to attend Middle Bucks Institute of Technology, and why you are interested in the programs you selected as your first and second choice. If there is additional information that would help the application committee in deciding your acceptance, including obstacles you have overcome to be successful, please share that as well. You may use additional paper if necessary.

SECTION III – TO BE COMPLETED BY APPLICANT

PROGRAM/COURSE SELECTION

DIRECTIONS: Please indicate your first choice by placing a “1” in the space to the left of the course title. A “2” should be placed next to any second choice you desire should your first choice program be filled. All courses are open to students in grades 10-12.

Arts and Communication Career Pathways:

_____ Commercial Art & Advertising Design

_____ Multimedia Technology

Business Finance and Information Technology Career Pathways:

_____ Networking & Operating Systems Security

_____ Web Design & Interactive Media

Engineering and Industry Career Pathways:

_____ Automotive Technology

_____ Building Trades Occupations

_____ Computerized Drafting & Engineering Graphics

_____ Collision Repair Technology

_____ Electrical Technology

_____ Engineering Related Technology

_____ Horticulture Landscape & Design

_____ HVAC/Plumbing Technology

_____ Residential Construction Carpentry

_____ Welding Technology

Human Services Career Pathways:

_____ Cosmetology

_____ Culinary Arts & Science

_____ Early Childhood Care & Education

_____ Public Safety

Science and Health Career Pathways:

_____ Dental Occupations

_____ Medical & Health Professions

_____ Sports Therapy & Exercise Management

SECTION IV – TO BE COMPLETED BY PARENT/GUARDIAN

Please check all that apply. Data is used for state reporting and I.D.E.I.A. requirements

- Student has an IEP Student has a 504 Plan
- Student does not have an IEP English Language Learner (ELL)

Special Education Contact Person: _____ Phone Number: _____

SECTION V – REQUIRES APPLICANT AND PARENT/GUARDIAN SIGNATURE

ADMISSIONS AGREEMENT

A student’s admission to Middle Bucks, success and continued enrollment will depend on the following:

1. Regular Attendance – You will be expected to be prompt and adhere to school district and PA state attendance policies.
2. Positive Behavior and Self-Discipline – You will be expected to work cooperatively with all staff and students demonstrating respect and self-control at all times. Student’s discipline records will be reviewed during the application process in order to determine safe placement in an MBIT program.
3. Effort and Safety – You will be expected to participate actively in all educational activities as directed by the teacher, achieve to the best of your ability, and adhere to all safety rules and regulations. Furthermore, you agree not to attempt to perform any procedure, use any tools/equipment or handle any supply or material without proper training and the approval of the assigned teacher.
4. Financial Requirement – You may be required to purchase certain items that uniquely pertain to your particular program (e.g. personal safety equipment, clothing and/or selected tools).

Both the students and the parents agree to the requirements and acknowledge the inherent risk and potential for injury involved in career and technical programs. Your signature further indicates these requirements as a condition for acceptance to the Middle Bucks Institute of Technology. Failure to comply with the requirements may result in removal from Middle Bucks and reassignment to a more appropriate educational program.

I am committed to the admissions agreement and request admission to the program/course as indicated.
I approve this application and hereby give permission for the release of any and all school records concerning the applicant.

Student Signature

Date

CONSENT AUTHORIZATION (Parent/Guardian must read and sign)

I am the parent or legal guardian of the student applicant, have examined the information on this application, and agree with the course selection(s) my son/daughter has requested. I understand that I am responsible for all fees and materials required as part of my child’s program at MBIT.

Parent/Guardian Signature

Date

HVAC & PLUMBING TECHNOLOGY

Instructor: **Jeffrey Muschlitz**

HVAC CIP Code: 47.0201 Plumbing CIP Code: 46.0503

These nationally recognized **Residential Construction Academy** (RCA) accredited instructional programs, in conjunction with the **National Association of Home Builders** (NAHB) and the **Home Builders Institute** (HBI) have been designed around a business, industry, and national skills standards model. These programs use project-based methods and national performance standards to instruct and evaluate students in a variety of careers in the mechanical and building maintenance industries. Students receive highly technical instruction that prepares them for an entry-level position using their academic and technical knowledge and skills to install, service and maintain heating, air conditioning, and plumbing systems. Instruction includes: daily theory and hands-on application of basic principles of heating, ventilation, air conditioning, refrigeration and plumbing systems; installation of rough-in plumbing systems in frame construction and installation of rough-in plumbing systems in ground; installation of residential plumbing fixtures, garbage disposals, kitchen and bath faucets, hot water heaters, gas fuel piping; installation of residential cooling systems and heating systems; installation of refrigeration systems, blueprint reading, drain cleaning methods, HVAC trouble shooting methods and component replacement. Instruction further includes: the use of ICC 2015 code books for plumbing, mechanical, and fuel/flue gas piping, basic hand tools, power tools and power equipment, refrigerant recovery equipment, manifold gauges, digital multi-meters and testing equipment. All students choosing this pathway will be enrolled in the Plumbing and HVAC Technology program for their first year and second year. During their third year in the program, students will focus their studies by selecting either the HVAC pathway or the Plumbing pathway.



CAREER PATHWAYS:

- Journeyman Plumber
- Service Technician
- Installation Technician
- Maintenance Technician
- Refrigeration Service Technician
- Estimator
- Specification Writer
- Production Manufacturing Supervisor
- Heating Plant Technician
- Self-employed Contractor
- Inspector
- Sales Representative

AVAILABLE INDUSTRY CERTIFICATIONS

- American Ladder Institute Safety Training
- EPA 608 Certification for Refrigerant, Recycling and Recovery
- Gastite and Tracpipe Flexible Gas Piping
- NATE Core and Specialty Exams
- OSHA 10 Hour Safety
- PBA Skills Certificate

COLLEGE ADVANCED CREDITS

- Bucks County Community College
- Delaware County Community College

PROGRAM RECOMMENDATIONS

- Algebra 1
- Color perception
- Hand-eye coordination
- Physical stamina
- Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

- Appropriate uniform attire (approximately \$60)
- OSHA 10 Hour Safety (approximately \$25)
- Refrigerant Recovery License Exam fees (approximately \$25)
- Selected tools and reference materials (approximately \$95)



RESIDENTIAL CONSTRUCTION CARPENTRY

Instructor: **Anthony Rogers**

CIP Code: 46.0201

This nationally recognized **Residential Construction Academy (RCA)** accredited instructional program, in conjunction with the **National Association of Home Builders (NAHB)** and the **Home Builders Institute (HBI)**, prepares students in all phases of building construction including: site layout, footing and foundation construction, framing systems, exterior finishes, insulation, drywall, finish carpentry and cabinet installations, all with emphasis on residential home construction. Students also learn the proper use of hand and power tools, construction materials, estimating, blueprint reading, and construction safety. A **full-scale student-built house is constructed** as a project in which advanced level students bring all their skills together as a culminating activity. Students will work in teams and under a variety of real occupational conditions. Students completing this program will be prepared to begin entry-level employment in construction carpentry and related trade areas. Students will also have the technical skills to pursue an associate or baccalaureate degree in construction-related fields such as construction technology.



CAREER PATHWAYS:

- Master Carpenter
- Rough Framer
- Finish Carpenter
- Builder
- Building Inspector
- Project Manager
- Drywall Installer & Finisher
- Construction Superintendent
- Roofing & Siding Installer
- Independent Contractor
- Construction Estimator
- Construction Manager

AVAILABLE INDUSTRY CERTIFICATIONS

OSHA 10 Hour Safety
PBA Skills Certificate
Residential Construction Academy National Registry

COLLEGE ADVANCED CREDITS

Bucks County Community College
Delaware County Community College
Triangle Tech

PROGRAM RECOMMENDATIONS

Ability to adhere to strict safety regulations
Ability to work in teams
Ability to work in various weather conditions
Hand-eye coordination
Mathematics fundamentals
Physical stamina
Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$50)
OSHA 10 Hour Safety (approximately \$25)
Tool belt and selected tools (approximately \$50)

STEM ACROSS THE CURRICULUM PROGRAM



WELDING TECHNOLOGY

Instructor: **Paul Carney**

CIP Code: 48.0508

This instructional program prepares students in oxy/fuel welding, cutting and brazing, shielded metal arc, gas metal arc, gas tungsten arc, flux core, carbon arc, plasma cutting using manual and **Computerized Numerical Control (CNC)** programming welding processes. Students are trained in the different types, sizes and uses of electrodes and welding rods; welding symbols, and the use of measuring instruments, hand tools, and portable grinders. Theory in metallurgy, electrical principles, blueprint reading, layout and design, and CNC programming on fabrication equipment is provided. Practical problems in math, preparation of material lists, cost estimating and methods of quality assurance are also covered. Quality control inspections include the use of destructive and non-destructive testing equipment. The welding standards and procedures established by the **American Welding Society (AWS)**, **American Society of Mechanical Engineers (ASME)**, the **American Bureau of Ships (ABS)**, the **American Petroleum Institute (API)**, and safety practices outlined in the **American National Standards Institute (ANSI Z49.1)** code books will be practiced. Students may pursue advanced studies at the postsecondary level in fields including: welding engineering, metallurgy, structural design, energy technology, underwater welding, quality control and inspection, as well as apprenticeships. This program provides an excellent foundation of technical knowledge for college and/or direct employment.



CAREER PATHWAYS:

- Underwater Welder
- Production Welder
- Materials Engineer
- Welding Inspector
- Metal Fabricator
- Welding Supervisor
- Maintenance Welder
- Ironworker
- Boilermaker
- Metallurgist
- Sheet Metal Welder
- CNC Plasma Welder

AVAILABLE INDUSTRY CERTIFICATIONS

- ASME/AWS Code
- AWS Entry Level Welder
- OSHA 10 Hour Safety

COLLEGE ADVANCED CREDITS

- Bucks County Community College
- Delaware County Community College
- Harrisburg Area Community College
- Northampton Community College
- Pennsylvania College of Technology
- Triangle Tech

PROGRAM RECOMMENDATIONS

- Ability to adhere to strict safety regulations
- Fine motor skills
- Mathematics fundamentals
- Physical stamina
- Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

- Appropriate uniform attire (approximately \$40-\$70)
- Industry certification testing fees (varied)
- OSHA 10 Hour Safety (approximately \$25)
- Textbook and lab manual

STEM ACROSS THE CURRICULUM PROGRAM



American Welding Society



COSMETOLOGY

Instructors: **Maura Duncan and Jo Ann McLaughlin**

CIP Code: 12.0401

This program is designed to comply with the rules, regulations and state-mandated curriculum of the **Pennsylvania State Board of Cosmetology**. Instruction is provided in a variety of beauty treatments, including the care and beautification of the hair, skin, and nails. Included in this curriculum is: training in shampooing, hair styling, haircutting, hair coloring and hair lightening, chemical texturizing, facials, manicures and pedicures, nail technology, bacteriology, chemistry, electricity, anatomy and physiology, hygiene, sanitation, salon management, and communication skills. Students completing all the requirements, including the 1,250 hours of instruction, are eligible to receive selected **PA State Board of Cosmetology Licenses** upon successful examination. Upon issuance of a professional license by the PA State Board of Cosmetology, students are qualified for employment in a full-service salon or advanced licensing and teaching. Other options include collegiate study in business or marketing, providing employment opportunities as manufacturers' representative and/or small business owner.



CAREER PATHWAYS:

- Cosmetologist
- Make-up Artist
- Esthetician
- Cosmetology Teacher
- State Board Examiner
- Competition Stylist
- Salon Owner
- Nail Technician
- Product Representative & Educator
- Platform Artist
- Chemical Technician
- Colorist

AVAILABLE INDUSTRY CERTIFICATIONS

PA State Board of Cosmetology License

COLLEGE ADVANCED CREDITS

Bucks County Community College

PROGRAM RECOMMENDATIONS

Ability to adhere to strict safety regulations
Color perception and accurate vision
Effective communication skills
Fine motor skills
Good interpersonal skills
Good organizational skills
Mathematics fundamentals, including liquid measurements
Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Cosmetology kits (approximately \$630)
Industry certification testing fees (approximately \$93)
Must serve as both an operator and a peer model for all reversible services
Social Security # or Federal # (required to record hours)
PA Criminal Record Check

Pennsylvania State Board of Cosmetology

Cosmetologist License

CULINARY ARTS & SCIENCE

Instructors: **Michael McCombe and Michael Stafford**

CIP Code: 12.0508

This **American Culinary Federation** (ACF) accredited secondary education program prepares students for employment in the hospitality industry, the largest industry in America today. Instruction includes theory and applications related to: food preparation, food management, food science, menu and banquet planning, food and beverage purchasing, quality control, cost analysis, commercial baking and pastry, catering, chef preparation, institutional foods, meat cutting, cooking methods, nutrition, dining room services, safety, and sanitation. Students learn the safe and proper use of hand and mechanical kitchen appliances, stoves, and ovens related to the industry. Practical experience is a major part of the course through the operation and management of a complete restaurant and catered banquet affairs. Hands-on instruction includes food preparation techniques required in a variety of food service establishments. Upon completion of the program, students will be prepared for entry-level positions in the food service industry or advanced study at a culinary institute or college.



CAREER PATHWAYS:

- Restaurant Owner/Manager
- Executive Chef
- Food & Beverage Director
- Dietitian
- Food Specialist
- Banquet Chef
- Health Inspector
- Meat Cutter
- Saucier
- Chef Steward
- Baker
- Pastry Chef

AVAILABLE INDUSTRY CERTIFICATIONS

- ACF Certified Junior Culinarian
- ACF Secondary Culinary Graduate
- ServSafe/Manager Food Safety

COLLEGE ADVANCED CREDITS

- Bucks County Community College
- Culinary Institute of America
- Northampton Community College
- Walnut Hill College

PROGRAM RECOMMENDATIONS

- Basic computer skills
- Effective written and oral communication skills
- Good interpersonal skills
- Mathematics fundamentals
- Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

- Appropriate uniform attire (approximately \$200)
- Industry certification testing fees (approximately \$60 per test)
- Workbook (approximately \$20)

STEM ACROSS THE CURRICULUM PROGRAM



EARLY CHILDHOOD CARE & EDUCATION

Instructor: **Lise Rich**

CIP Code: 19.0708

This program prepares students for careers in education. Students observe and interact in a variety of early childhood settings including community child care centers, the **Bucks County Intermediate Unit** and early intervention programs as well as **Li'l Bucks Partners in Learning**, our on-site child care center. Students assist in the operation of Li'l Bucks Partners in Learning, which is licensed as a Pennsylvania-approved child care center and a Keystone Star 3 center. Through Li'l Bucks Partners in Learning, students are exposed to a diverse population of young learners. Students age 16 or older are involved in understanding child development, supervising play, learning skills in behavior management, maintaining a safe and healthy environment, developing an understanding of policies and procedures regarding child care services, and developing lesson plans, observation skills, and other professional skills. The program is aligned to the **Child Development Associate** (CDA) requirements as well as Pennsylvania's Program of Studies for Child Care. Students have opportunities to make community connections that can lead to participation in TEACH and Rising Stars, an internship type program that provides college scholarships for those interested in pursuing education in early childhood. A degree in Early Childhood leads to careers in teaching children PreK-3rd grade or directing/owning a child care center. This program provides an excellent foundation of technical knowledge for college and/or direct employment.



CAREER PATHWAYS:

- Personal Care Assistant
- Elementary Education Teacher
- Special Education Teacher
- Early Childhood Education Teacher
- Children's Librarian
- Preschool Director
- Group Supervisor
- Child Life Specialist
- Group Home Counselor
- Speech /Language Specialist
- Licensed Child Care Provider
- Nanny

AVAILABLE INDUSTRY CERTIFICATIONS

Assistant Group Supervisor
 CDA Certification
 Penn State Extension Better Kid Care
 DHS-Assistant Group Supervisor
 PA Keys 101 + 102 University of Pittsburgh mandate reporter Training
 PA Keys CPR Training
 PA Keys Fire Safety Training
 PA Keys Pediatric First Aid Training

COLLEGE ADVANCED CREDITS

Bucks County Community College
 Community College of Philadelphia
 Harcum College
 Harrisburg Area Community College

PROGRAM RECOMMENDATIONS

Effective communication skills
 Emotional stability
 Mathematics fundamentals
 Physical stamina
 Read and interpret educational material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Age verification
 Annual clearances, including PA Child Abuse History Clearance and PA Criminal Record Check (free for volunteers), and FBI Criminal Background Check (approximately \$25)
 Physical examination, including Tuberculin Skin Test (at student's expense)
 Two written letters of reference

COUNCIL
 for
**PROFESSIONAL
 RECOGNITION**



The Child Development Associate (CDA) Credential™

PUBLIC SAFETY

Instructor: **John Fala**

CIP Code: 43.9999

The Public Safety program is designed to prepare students for careers in four broad areas of public safety; law enforcement; fire protection, emergency health services, and security and loss prevention. Students will study and perform skills in the following topics: Safety, Criminal Justice System, Law Enforcement, Private and Homeland Security, Corrections, Communications, Incident Command, Firefighting, Emergency Medical Services, Hazardous Materials and Defensive Techniques. Through report writing and information retrieval, students will apply and refine their communication and computer skills while working on their personal development skills. The curriculum will include discussion and case studies on professionalism, ethics, cultural diversity, and conflict resolution. Classroom and laboratory experiences will be held at both MBIT and the **Bucks County Public Safety Training Center**. This program provides an excellent foundation from which to pursue a two- or four-year college degree and ultimately a career in public safety.



CAREER PATHWAYS:

- Municipal Officer
- Emergency Medical Technician
- Paramedic
- Emergency Management Technician
- Probation/Parole Officer
- Firefighter
- State Police Officer
- Corrections Officer
- Park Ranger
- Security Officer
- Military Police
- Safety Inspector or Supervisor

AVAILABLE INDUSTRY CERTIFICATIONS

American Heart Association Heartsaver CPR, AED and First Aid
FEMA Emergency Management Institute
National Incident Management System Level 100, 200, 700, and 800
Emergency Medical Technician
Firefighter I
MOAB - Management of Aggressive Behavior
OCAT – Pepper Spray
PPBT - Baton Tactics
PATH - Practical and Tactical Handcuffing
Hazardous Materials Awareness and Operations
ASHI – Advanced First Aid

COLLEGE ADVANCED CREDITS

Bucks County Community College
Pittsburgh Technical College

PROGRAM

RECOMMENDATIONS

Algebra I
Basic computer skills
Effective written and oral communication skills
Emotional stability
Physical and mental fitness
Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Appropriate uniform attire (approximately \$170)
PA Criminal Record Check (approximately \$10)
Physical exam (at student's expense)

STEM ACROSS THE CURRICULUM PROGRAM



MOAB

DENTAL OCCUPATIONS

Instructor: **Lisa Viviano**

CIP Code: 51.0601

This program will prepare students to function as an integral member of a dental health team by developing the skills necessary for an entry-level position as a Dental Assistant, Orthodontic Assistant, Clinical Assistant, Dental Laboratory Technician, or Dental Receptionist. The core curriculum will include instruction in dental terminology, dental radiology, infection control, oral pathology, chairside dental assisting, anatomy and physiology, nutrition, and OSHA regulations. **Dental Science** instruction will include content in dental materials, dental radiology, oral anatomy and pathology, and therapeutics. **Clinical Science** instruction will emphasize principles of office management, chairside assisting, sterilization procedures, dental emergencies, and legal and ethical aspects of dental practice. **Clinical education** is also an integral part of the program, designed to perfect students' competence in performing dental assisting functions. Proficiency in job-related skills is obtained through lecture and hands-on experience in the lab or clinical setting. Students will also gain practical experience through the **Middle Bucks Dental Clinic**, which allows students to work alongside dentists and hygienists as dental services are provided to members of the community. Leadership skills and opportunities are encouraged through active involvement in Future Health Professionals (HOSA), our state and nationally recognized student organization. This program provides an excellent foundation of technical knowledge for college and/or direct employment.



CAREER PATHWAYS:

- Clinical Manager
- Dentist
- Dental Hygienist
- Expanded Function Dental Assistant
- Certified Dental Assistant
- Front Desk Office Coordinator
- Laboratory Technician
- Certified Orthodontic Assistant
- Orthodontist
- Periodontist
- Oral Surgeon

AVAILABLE INDUSTRY CERTIFICATIONS

- Basic Life Support for Healthcare Providers
- DANB Infection Control
- DANB National Entry Level Dental Assistant
- DANB Radiation Health and Safety
- OSHA Career Safe Healthcare Provider

COLLEGE ADVANCED CREDITS

- Bucks County Community College
- Harrisburg Area Community College
- Harum College ~ EFDA Program
- Manor College ~ EFDA Program

PROGRAM RECOMMENDATIONS

- Effective written and oral communication skills
- Finger dexterity
- Hand-eye coordination
- Mathematics fundamentals
- Near vision
- Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

- Activity fees (approximately \$25)
- Appropriate uniform attire (approximately \$75)
- DANB RHS Exam Fees \$225 (third year in the program)
- Physical examination, including Hepatitis B and Tuberculin Skin Test (at student's expense)
- Workbooks (approximately \$75)



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STEM ACROSS THE CURRICULUM PROGRAM

MEDICAL & HEALTH PROFESSIONS

Instructors: **Sherry Appleton and Lynda Moyer**

CIP Code: 51.0899

The Medical & Health Professions program is designed to prepare students for careers in the medical and allied health fields. Students will be exposed to various healthcare professions and settings, which will allow them to make a more informed decision about their future education and career. The core curriculum includes: introduction to healthcare, professionalism, infection control, anatomy and physiology, medical terminology, communication, personal and environmental safety, emergency and disaster preparedness, ethical and legal responsibilities, nutrition, human growth and development. Additional instruction in clinical skills includes: moving, lifting, and positioning of patients, vital signs, standard precautions, and patient care. Students are provided with both clinical and shadowing experiences in area hospitals, including **Abington/Jefferson Hospital**, and long-term care facilities, including **Neshaminy Manor**. Leadership skills and opportunities are encouraged through active involvement in Future Health Professionals (HOSA), our state and nationally recognized student organization. This program provides an excellent foundation of technical knowledge for college and/or direct employment.



CAREER PATHWAYS:

- Medical Assistant
- Nurse Aide
- Patient Care Technician
- Professional Nurse
- Advance Care
- Radiologist
- Pharmacy Technician
- Pharmacist
- Physician Assistant
- EKG Technician
- Physician
- Home Health Aide

AVAILABLE INDUSTRY CERTIFICATIONS

- Basic Life Support for Healthcare Providers
- ECG/EKG Technician
- Patient Care Technician
- Nurse Aide Registry
- OSHA 10 Hour Safety

COLLEGE ADVANCED CREDITS

- Bucks County Community College
- Delaware County Community College
- Harrisburg Area Community College

PROGRAM RECOMMENDATIONS

- Effective written and oral communication skills
- Finger dexterity
- Hand-eye coordination
- Laboratory science
- Mathematics Fundamentals
- Near vision
- Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

- Activity fees (approximately \$60)
- Appropriate uniform attire (approximately \$80)
- Annual clearances, including PA Criminal Record and FBI Criminal Background Checks (approximately \$30)
- Physical examination, including Hepatitis B, Tuberculin Skin Test, and Flu vaccine (at student's expense)
- Workbooks (approximately \$120)



STEM ACROSS THE CURRICULUM PROGRAM

SPORTS THERAPY & EXERCISE MANAGEMENT

Instructor: **Sean Castineira**

CIP Code: 51.2604

The Sports Therapy & Exercise Management program is designed to prepare students for many technical fields related to kinesiology. Instruction includes theory and applications related to strength training and high intensity training, weight management, nutrition, resistance training, exercise programming, exercise physiology, mental health and wellness, anatomy and physiology, pathophysiology, athletic training, injury recognition and management, rehabilitation and restorative care, and medical terminology. Students will learn to design safe and effective exercise prescriptions, conduct fitness testing, and develop individual exercise programs. Students will be prepared for employment in a wide variety of settings that include fitness clubs, hospitals, corporate wellness programs, strength and conditioning programs, and clinical rehabilitation programs. In addition, the program serves as a strong foundation for students wishing to pursue advanced degrees in the field of exercise science or enter professional disciplines such as athletic training, physical therapy, or occupational therapy. Leadership skills and opportunities are encouraged through active involvement in Future Health Professionals (HOSA), our state and nationally recognized student organization. The students will also have the opportunity to participate in clinical experiences with Athletic Trainers through the **Doylestown YMCA** and with Physical Therapists through the **Bucks County Intermediate Unit**.



CAREER PATHWAYS:

- Fitness Trainer
- Fitness Instructor
- Physical Therapist
- Athletic Trainer
- Occupational Therapist
- Nutritionist
- Personal Trainer
- Wellness Coordinator
- Physical Therapist Assistant
- Fitness Coordinator
- Physical Education Teacher
- Athletic Coach

AVAILABLE INDUSTRY CERTIFICATIONS

American Heart Association Basic Life Support CPR and AED
 American Red Cross First Aid
 Personal Fitness Trainer

COLLEGE ADVANCED CREDITS

Bucks County Community College

PROGRAM RECOMMENDATIONS

Laboratory science
 Mathematics fundamentals
 Read and interpret technical material at grade level

PROGRAM REQUIREMENTS/ ESTIMATED COSTS

Activity fees (approximately \$25)
 Annual clearances, including PA Child Abuse History Clearance, PA Criminal Record Check, and FBI Criminal Background Check (approximately \$50)
 Appropriate uniform attire (approximately \$50)
 Physical examination, including Hepatitis B and Tuberculin Skin Test (at student's expense)
 Workbooks (approximately \$30)



STEM ACROSS THE CURRICULUM PROGRAM

RELATED PROGRAMS AND SERVICES

STUDENT SUPPORT SERVICES

The following additional services are available to current students and/or prospective students:

- Academic skill support
- Career guidance and counseling
- Career assessment and development
- Equity services for non-traditional students
- Student assessment/aptitude testing
- Special support and placement
- Health services

Instructional support services are provided based on each student's individual needs to ensure their success. These services include assistance in math, reading, writing, technical skills, job seeking and retention skills, communication and interpersonal skills, and testing.

WORK-BASED EDUCATION

As part of their chosen educational program, students may extend their educational training to an actual work site. In cooperation with local business and industry, students may participate in apprenticeship, co-op, internship, externship, clinical and/or shadowing experiences. All company sites selected for work-based training are evaluated on their ability to offer a relevant, safe, and supervised experience. Formal training agreements and plans are required of each work site to create the structure necessary for a successful experience. Work-based education reinforces and supplements the technical education received at Middle Bucks Institute of Technology and is scheduled based on student need and readiness.

Occasionally, an opportunity may arise for registered student apprenticeships through the Federal Bureau of Apprenticeship and Training, and the Pennsylvania Apprenticeship and Training Council in several of our trade areas. These registered programs are sponsored jointly by employers and labor organizations. Middle Bucks Institute of Technology, through our work-based education department, is helping to establish registered apprenticeships and provide these sponsors with qualified students. These apprenticeship experiences provide our students with a head start toward their journeyman certification.

CAREER AND TECHNICAL STUDENT ORGANIZATIONS

Career and Technical Student Organizations (CTSOs) are an integral part of the educational program at Middle Bucks Institute of Technology. These co-curricular experiences provide students with opportunities to develop leadership skills and to participate in community service activities. Students are also able to compete locally, regionally, statewide, and nationally in skill and leadership competitions in their career specialty. All students are expected to participate in SkillsUSA and one of the following organizations if relevant to their program of study: Future Health Professionals (HOSA), Future Farmers of America (FFA), or the Pennsylvania Builders Association (PBA). There is a \$25 activity fee assessed to all students attending MBIT, which is applied to their state and national SkillsUSA dues.

PORTFOLIOS

Portfolio development is an instructional strategy used to highlight students' work in all of the career and technical programs at MBIT. All students will develop a portfolio which represents a collection of work that can be presented to a prospective employer or college/university representative.

INDUSTRY CERTIFICATIONS

The high-performance workplace demands a skilled, competent workforce. In order to provide a standard of performance, many industries have developed and offer examinations or certification programs leading to a nationally recognized credential. At MBIT, opportunities are available for students to complete recognized industry credential or certification programs. All twenty-two career pathways lead to the earning of at least one industry credential. The Microsoft Office Specialist (MOS), Automotive Service Excellence (ASE), Emergency Medical Technician (EMT), and the Pennsylvania Department of Health Nurse Aide (NA) certifications are just some of the credentials and certifications that students can achieve while enrolled at MBIT. Please refer to the "Available Industry Certifications" section under each career pathway for a complete listing. Many of these certifications offer the student an advanced position in a variety of higher paying jobs in our community and/or advanced college credits.

JOB COUNSELING SERVICES

Based on the student's career goal, Middle Bucks Institute of Technology provides job counseling services to meet individual needs and interests. Placement rates for MBIT graduates have been excellent and have historically achieved 100% for those students who desire and actively pursue job or college placement. Middle Bucks Institute of Technology is committed to the placement of all successful students. In addition, placement services are available to all MBIT alumni.

ADULT AND INDUSTRY EDUCATION

Adult day programs are offered to adults interested in studying for a new career. Adult students are accepted into all daytime programs as space permits. Adult evening classes are offered in the fall and spring semester, allowing adult students to learn new skills or upgrade current skills for employment. Online courses are available to adult students through our web-based partner ED2GO, which is accessible from our school website. Custom industry training courses for employees within the community can be designed to meet specific training needs and can be delivered at a company site or at MBIT. Finally, Middle Bucks Institute of Technology is now a U.S. Department of Veterans Affairs-approved training center. Veterans eligible for education benefits can now use those benefits to enroll in any of 11 approved adult education programs offered by the school.



FACULTY AND STAFF PROFILES

SHERRY APPLETON

Teaching Assignment: Medical & Health Professions

B.S. in Nursing from Thomas Jefferson University; over twenty-five years of clinical nursing experience specializing in surgical nursing (GI, Orthopedics and Rheumatology) infusion oncology; professional work experience includes employment at Cancer Treatment Centers of America and Thomas Jefferson University Hospital; CPR, ACLS, and OSHA 10 Hour Safety certified; pursuing a M. Ed. in Education from Temple University; possesses Professional Nursing licensure and Pennsylvania teaching certificate.

PAUL CARNEY

Teaching Assignment: Welding Technology

B.S. in Education, Temple University; Twenty-nine years of experience as CTE Welding Technology Instructor, over 40 years of occupational experience; Former President, Pennsylvania Association of Welding Educators (PAWE); American Welding Society (AWS) Silver Member; AWS Certified Welding Educator (CWE); AWS/API Certified Welding Inspector (CWI/API); American Petroleum Institute API 1104; AWS Certified D1.1 structural and ASME IX code welder, holds U.S. Defense Nuclear Certification for pipe and structural welding; Power Generation Service Technician on nuclear and fossil steam turbines; qualified as a quality circle leader and laser technician by General Electric Aerospace Division; President of Carnac Industrial Training and Consulting; past member of International Society of Welding Educators (ISWE) and member since 1980 of the American Welding Society, Lehigh and Philadelphia Chapters; served as a Mentor Teacher; awarded 2016 Teacher of the Year for Career and Technical education by Pennsylvania Association for Career and Technical Education (PA-ACTE); possesses Pennsylvania teaching certificate and Cooperative Education certification.

SEAN CASTINEIRA

Teaching Assignment: Sports Therapy & Exercise Management

B.S. in Athletic Training, Alvernia University; two years professional physical therapy experience treating patients; two years athletic training experience as the Athletic Trainer at Downingtown West High School; internship with the Reading Royals professional hockey team of the ECHL; currently employed as the Athletic Trainer for United Sports Training Center; certified instructor in CPR/AED and Basic Life Support through the American Heart Association; board certified in athletic training; possesses Pennsylvania Athletic Training license; possesses Pennsylvania teaching certificate.

PAUL CIARLONE

Teaching Assignment: Automotive Technology

Thirty plus years of occupational experience, including fifteen years as owner/operator of an automotive repair business and twenty years of experience as an instructor; certification from Automotive Training Center in Specialized Automotive Service Technology with a Machine Shop Major; certification from RETS Electronics in Electronic and Microprocessor Technology; ASE Certified Master Technician; ASE Certified L1 Advanced Engine Performance Specialist; certified Instructor for Pennsylvania Safety Inspection License, Enhanced Emissions Inspector Certification, Fundamental Inspection Repair System Training; certified with Mobile Air Conditioning Society (MACS) to perform air conditioning refrigerant recovery; Emission Diagnostician Graduate Education Training Program; Daimler Chrysler factory trained in all skill areas; Ford factory trained in Electrical/Electronic, Multiplexing, Suspension, ABS and Climate Control; National Train the Trainer for OBDII; possesses Pennsylvania teaching certificate.

JAMES DAVEY

Teaching Assignment: Multimedia Technology

B.A. in Communications, Temple University; over thirty years of experience in live television, scripted and reality television, corporate communications, and marketing; professional certification in Adobe Premiere, Adobe Photoshop and Illustrator; small business owner; member of National Academy of Television Arts and Sciences; recipient of multiple Emmy®, Telly, and Communicators awards; member of Omicron Tau Theta; possesses Pennsylvania teaching certificate.

FACULTY AND STAFF PROFILES

LAUREN DOHERTY

Assignment: Career & Technical Education Supervisor

M.Ed. in Secondary School Counseling, Kutztown University; BSW in Social Work, Temple University; member of the American School Counselor Association (ASCA), the Pennsylvania School Counselor Association (PSCA), and the Pennsylvania Association of Career and Technical Administrators (PACTA); certified Student Assistance Program facilitator. Currently enrolled in Pennsylvania Supervisor of Career and Technical Education Program at Temple University; possesses Pennsylvania Secondary School Counseling and Supervisor of Career & Technical Certifications.

MAURA DUNCAN

Teaching Assignment: Cosmetology

Possesses State Board of Cosmetology Teacher certification; thirteen years teaching experience and three years as an Instructional Assistant; Certified Makeup Artist member of Association of Vocational Teachers Educating in Cosmetology; Certified in KCMAX Maximum Keratin Smoothing System; active licensed stylist; graduate of Middle Bucks Institute of Technology; possesses Pennsylvania teaching certificate.

ANGELA EGGE

Assignment: Special Education Teacher

M.Ed. in Education, East Stroudsburg University; B.S. in Biology, Old Dominion University; certification in Secondary Education and Special Education; pursuing Special Education Supervisory Certification at East Stroudsburg University; Twenty years teaching experience; three years administrative experience; member of the Bucks County Autism Support Coalition, PA Association of Career & Technical Education Special Populations and Council for Exceptional Children; PA Special Education Fellowship Leadership member; possesses OSHA 10 Hour Safety certification in Construction Safety and Health, General Industry, Healthcare, Safety and Health, Agriculture; Certified in S/P2 Online training; and Pennsylvania K-12 Special Education certificate.

MICHAEL ESPOSITO

Teaching Assignment: Networking & Operating Systems Security

B.A. in History, East Stroudsburg University; CompTIA A+ (220-901/220-902), and CompTIA Security+ certification; over ten years of industry experience as Network Administration, System Administration, System Engineering, Project Management, Data Management, Core Networking, and Critical Site Facility Support; possesses Pennsylvania teaching certification.

JOHN FALA

Teaching Assignment: Public Safety

M.S. in Public Administration, Pennsylvania State University; B.A. (magna cum laude) in Criminal Justice, Temple University; fifteen years of experience in the field of Criminal Justice; awarded Pennsylvania Career and Technical Education Teacher of the Year; certification as ASHI Instructor; NFPA certified Fire Fighter, Pennsylvania Department of Health State Certified Emergency Medical Technician Instructor, Management of Aggressive Behavior (MOAB) Instructor; Practical and Tactical Handcuffing (PATH) Instructor; Expandable Baton Instructor; Oleoresin Capsicum Aerosol Training Instructor (OCAT), possesses Pennsylvania teaching certificate.

FACULTY AND STAFF PROFILES

SANDRA FITZPATRICK

Assignment: Special Education Teacher

M.Ed. (cum laude) in Special Education, Arcadia University; B.A. (summa cum laude) in Psychology, Gwynedd Mercy University; twenty-four years of experience in Career and Technical Education; member of Pennsylvania Association of Career and Technical Administrators (PACTA), Council for Exceptional Children, and Autism Speaks; possesses OSHA 10 Hour Safety certification in Construction Safety and Health, General Industry Safety, and Health and Job Site Safety-Agriculture; possesses Pennsylvania K-12 Special Education certificate.

STACEY FLOOD

Assignment: Special Education Teacher

M.Ed. in Education, LaSalle University; B.S. Psychology, East Stroudsburg University; Certification in Special Education K-12, LaSalle University; fifteen years of experience in Career and Technical Education; Certified QPR Suicide Prevention Gatekeeper Instructor; possesses OSHA 10 Hour Safety Certification in Construction Safety and Health, General Industry, Healthcare, Safety and Health, and Agriculture; Certified in S/P2 Online training; and Pennsylvania K-12 Special Education certificate.

DR. THOMAS GREGOR

Assignment: Work-Based Education Teacher/Coordinator

Ph.D., Vocational, Technical and Adult Education, minors in Industrial Management and College Administration, University of Missouri; M.S. in Technical Education and Industrial/Consumer Psychology, Purdue University; B.S. in Education and Engineering, Purdue University, five years secondary school teaching; two years of experience working with the State Department of Education; nine years university teaching experience in engineering and vocational education, five years university administration experience; published numerous articles and textbooks in technical and professional areas; nineteen years business/industry experience in corporate training, employee relations, and organizational development; held numerous leadership positions in educational and business associations; possesses Pennsylvania certificates in teaching, Cooperative Education, and Supervisor and Director of Vocational Education.

STEPHANIE GREGORY

Assignment: School Counselor

M.S. in Psychology, St. Joseph's University; B.S. (summa cum laude) in Psychology, St. Joseph's University; fifteen years of experience working in Career and Technical Education; certified Bullying Prevention Specialist and certified QPR Suicide Prevention Gatekeeper Instructor; member of Psi Chi, The International Honor Society in Psychology, the Association for Career and Technical Education (ACTE), the Pennsylvania School Counselors Association (PSCA), the American School Counselor Association (ASCA), the Bucks County School Counselors' Advisory Council, and the Bucks County Community College Guidance Counselor Advisory Board; possesses Pennsylvania Secondary School Counselor certification.

STEVEN GUINAN

Teaching Assignment: Web Design & Interactive Media

M.Ed. in Business, Computer, & Technology Education, Temple University; B.S. in Graphic Design Communications, Philadelphia University; five years professional work experience in business management; five years professional work experience as a graphic designer; certified in Microsoft Office and Adobe Dreamweaver, Illustrator and PhotoShop; possesses Pennsylvania teaching certificates in Cooperative Education and Business, Computers, and Information Technology and Pennsylvania Supervisor of Career and Technical Education Certification.

FACULTY AND STAFF PROFILES

LAURINDA HELLWIG

Assignment: School Counselor

M.A. in Counseling Psychology, Delaware Valley University; B.A. in Psychology and Social Sciences, Pennsylvania State University; A.A. Psychology with an Interpersonal Emphasis, Bucks County Community College; member of the American School Counselor Association(ASCA); five years' experience in Career and Technical Education; six years' experience in higher education at BCCC, Penn State Abington, and Gwynedd Mercy University; prior experience with clinical mental health and drug/alcohol counseling; currently pursuing Pennsylvania Licensed Professional Counselor (LPC) credentials; possesses Pennsylvania Elementary & Secondary School Counselor certification.

ARNOLD JAZLOVIETCKI, JR.

Teaching Assignment: Collision Repair Technology

B.S. in Education, Temple University; broad range of occupational experience in all aspects of automotive collision repair; ASE certified in the areas of painting and refinishing, structural, and non-structural analysis and damage repair; I-CAR certified in eight areas of auto collision; possesses master level certification as a PPG painter and painter's trainer; Chief Automotive certificate for Full Frame Analysis and Repair Planning, Design Based Repair; Thirty-two years teaching experience in automotive collision repair; graduate of Middle Bucks Institute of Technology; possesses Pennsylvania certificates in teaching and Cooperative Education.

MARK LANCE

Teaching Assignment: Collision Repair Technology

Collision Reconditioning Technology certification, Automotive Training Center; two years teaching experience; broad range of occupational experience in all aspects of collision repair; ASE Master Certified Collision Technician; I-Car Gold Certified; NATEF Certified; possesses Pennsylvania teaching certificate.

CRAIG MALINOWSKI

Teaching Assignment: Computerized Drafting & Engineering Graphics

M.Ed. in Career and Technical Education, Temple University; B.S. in Architecture, Drexel University; A.S. in Architectural Drafting, Bucks County Community College; graduate of Middle Bucks Institute of Technology; twenty-five years occupational experience in Architecture and Drafting Technology; member of the American Design Drafting Association (ADDA) and National Council of Architectural Registration Boards (NCARB); Certified by Autodesk as Instructor for AutoCAD and Revit; Certified in OSHA 10-hour Construction Safety and Certified Drafting Instructor with ADDA; possesses Pennsylvania teaching certificate.

MICHAEL McCOMBE

Teaching Assignment: Culinary Arts & Science

AA in Culinary Arts, Culinary Institute of America; over forty years occupational experience in the hospitality industry working in both management and chef positions at various prestigious resort hotels, restaurants, country clubs, catering establishments, and food service companies; President and past Vice-President of the American Culinary Federation (ACF) Philadelphia Chapter; ACF Certified Executive Chef (CEC) and Certified Culinary Educator (CCE); possesses ACF certification in sanitation, supervisory hospitality management, nutrition and gluten free; academic mentor for the Culinary Institute of America; graduate of Middle Bucks Institute of Technology; National Technical Honor Society Advisor; recipient of the ACF Cutting Edge Award; instructor for the National Restaurant Association; recipient of the Central Bucks Chamber of Commerce Tree of Life Outstanding Educator Award; selected as Pennsylvania's Outstanding New Vocational Teacher by the Pennsylvania Association for Career and Technical Education (PA-ACTE); inducted into the American Academy of Chefs; awarded Chef of the Year 2019 by the American Culinary Federation's Philadelphia Chapter of the Delaware Valley Chefs' Association; possesses Pennsylvania teaching certificate.

FACULTY AND STAFF PROFILES

RANDALL McDOWELL

Teaching Assignment: Electrical Technology

B.S. in Vocational Education, Temple University; possesses PA Journeyman's certification; Thirty-three years of occupational experience in the field of residential and commercial electricity; certified in C-Tech Copper Based Cabling Systems and C-Tech Fiber Optic Based Systems; Green Advantage Environmental Residential/Commercial certification; National Center for Construction Education and Research (NCCER) Certified Electrical Instructor; possesses OSHA 10-hour Construction Safety certification; fourteen years teaching experience; member of Electrical Association of Philadelphia; advisor to the student chapter of the National Home Builders Association; possesses Pennsylvania teaching and Cooperative Education certificates.

JO ANN McLAUGHLIN

Teaching Assignment: Cosmetology

Teaching experience of over thirty-five years in private education; holds a cosmetology teaching license from the State Board of Cosmetology; member Cosmetology Educators of America; salon stylist; Matrix and Goldwell Certified Colorist; Pivot Point Certified; CliC certified; Certified in Babe Hair Extensions; Certified make-up artist, Martin Parsons and Paul Mitchell trained; Curriculum Development Manager and Regional Educational Director for private beauty school; member of the Association of Vocational Teachers Educating in Cosmetology; previously recognized as Teacher of the Year by Wilfred Academy; possesses Pennsylvania teaching certificate.

LYNDA MOYER

Teaching Assignment: Medical & Health Professions

B.S. (magna cum laude) in Nursing, Gwynedd Mercy University; pursuing M.Ed. in Education from Temple University; twenty years nursing experience specializing in rehabilitation and long-term care; professional work experience includes employment through the American Red Cross as a Nursing Instructor for their Certified Nurse Aide Program with clinical component; possesses Professional Nursing license in Pennsylvania, American Heart Association BLS Certified Instructor; OSHA certified; Certified Patient Care Technician; awarded 2017 New Teacher of the Year for Career and Technical Education by the Pennsylvania Association for Career and Technical Education (PA-ACTE); possesses Pennsylvania teaching certificate.

JEFFREY MUSCHLITZ

Teaching Assignment: HVAC/Plumbing Technology

A.S. in HVAC/Plumbing Technology, Pennsylvania College of Technology; five years as Adjunct Professor in HVAC Technology at Northampton Community College; Certified Master HVACR Educator from HVAC Excellence; eighteen years as HVAC/R contracting business owner; Pennsylvania Registered Master Plumber; Pennsylvania Licensed Residential Electrician; licensed Universal Refrigerant Technician; Master Oil Burner certification; Copeland Compressor certification; Plumbing Certificate from Pennsylvania College of Technology; R-410a certification; Trac and Gas Tite Flex Gas Pipe certification; Carrier Heat Pump certification; BlazeMaster Fire Sprinkler Installation Certification; T-Drill Machine Certification; OSHA 10-hour Construction Safety certification; NCCER HVAC, Plumbing, and Core Instructor certification; Keystone Technology Integrator; Pneumatic Controls, Chiller and Steam Systems experience; twenty-seven years of occupational experience in the HVAC/Plumbing industry; seventeen years teaching experience in the HVAC/Plumbing Technology program; possesses Pennsylvania teaching certificate.

THOMAS OMERZA

Teaching Assignment: Networking & Operating Systems Security

A.S. in Computer Sciences, Temple University; Microsoft Certified Systems Engineer (MCSE); MCP plus Internet; CompTIA A+ Certified Computer Repair Technician; Certified Computer Forensics Examiner (CCFE); Certified Data Recovery Professional (CDRP); nine years of experience as computer network administrator at George Westinghouse Vocational Technical High School; three years as network product manager for the Chubb Institute, Parsippany, NJ; twenty-six years teaching experience in computers and electronics; thirty years occupational experience in the computer industry; president and owner of Moonlight Computer Consulting; holds F.C.C. radio license; served in the U.S. Navy; possesses Pennsylvania teaching certificate.

FACULTY AND STAFF PROFILES

ALAN OSTROW

Teaching Assignment: Engineering Related Technology

M.S. in Mechanical Engineering, Drexel University; M.S. in Science Education, Drexel University; B.S. in Engineering, Temple University; ten years of Mechanical Engineering experience in the food and packaging industry as a Project Engineer and Research & Development Designer; twenty-three years of public school teaching experience in Math, Physics, and Robotics and twenty-one years of experience as a robotics coach and trainer. Awarded 2011 Philadelphia Regional Robotics Coach of the Year; 2010 FIRST World Championship Hall of Fame Coach; 2010 White House Science Fair Honoree; Currently a FIRST Global STEM Mentor and a Technical Mentor for the Honduran National Robotics Team; possesses Pennsylvania teaching certifications in Technology Education, Mathematics and Physics.

STACY PAKULA

Assignment: Assistant Administrative Director

M.A. in Psychology, LaSalle University; B.S., Psychology, James Madison University; twelve years as certified test supervisor through ACT; certified Student Assistance Program (SAP) facilitator; certified Olweus Bullying Prevention Specialist and QPR Suicide Prevention Gatekeeper; member of Psi Chi, the International Honor Society in Psychology, the Pennsylvania Association of Career and Technical Administrators (PACTA), and the Pennsylvania School Public Relations Association (PennSPRA); graduate of the Central Bucks Chamber of Commerce Leadership Advancement Program; currently enrolled in Pennsylvania Director of Career and Technical Education certification program at Temple University; possesses Pennsylvania Supervisor of Career and Technical Education and Director of Career and Technical education certifications.

LISE RICH

Teaching Assignment: Early Childhood Care & Education

M.Ed. in Special Education, Arcadia University; B.S. (cum laude) in Early Childhood Care and Elementary Education, Temple University; Director of Li'l Bucks Partners in Learning Child Care Center; member of National Association for the Education of Young Children (NAEYC) and Pennsylvania Child Care Association (PACCA); twenty-five years teaching experience with populations ranging from preschool to adults in a variety of settings, including public and private schools; experience in self-contained learning support and emotional support classrooms; Pennsylvania Quality Assurance System (PQAS) Organizational Trainer, Head Start Policy Council Member and Child Development Associate (CDA) Professional Evaluator; American Red Cross First Aid/CPR Instructor; possesses the PA Child Care Director's credential and Pennsylvania teaching certificate.

ANTHONY ROGERS

Teaching Assignment: Residential Construction Carpentry

Twelve years of occupational experience, including working for a custom home builder and owner/operator of a residential construction and carpentry business; thirteen years of teaching experience; National Center for Construction Education and Research (NCCER) certified Carpentry Instructor; completed course work at Temple University, Moravian College, Delaware Valley College, and Bucks County Community College; possesses Pennsylvania teaching certificate.

BRADLEY ROSENAU

Teaching Assignment: Commercial Art & Advertising Design

M.A. (magna cum laude) in Art Education with an emphasis on Special Populations, Moore College of Art and Design; B.S./Masters equivalency degree in Technical Education, Pennsylvania State University; Adobe Certified Associate Specialist Educator in Certipoint Visual Communications using Photoshop, Illustrator, and InDesign; awarded the Pennsylvania State University College of Education Alumni Outstanding Professional Teacher Award; extensive studio and freelance work, including experiences with illustration and graphic design for University Graphics Services and USA Today newspapers; served as newsletter chairperson for Omicron Tau Theta, National Honorary Professional Graduate Society in Career and Technical Education, Temple University; served as newsletter editor for the Pennsylvania State University Alumni Association, Montgomery County chapter; possesses Pennsylvania teaching certificate.

FACULTY AND STAFF PROFILES

ROBERT SCHWARZ

Teaching Assignment: Automotive Technology

M.Ed. in Career and Technical Education, Temple University; B.S. in Automotive Technology Management, Pennsylvania College of Technology; previous teaching experience as an automotive instructor at Community College of Philadelphia; occupational experience of greater than ten years working in dealerships and independently owned garages; ASE Certified Master Technician; ASE Certified L1 Advanced Engine Performance Specialist; ASE Certified Refrigerant Recovery and Recycling Technician; holds Pennsylvania Safety Inspector/Instructor license, Pennsylvania Emissions Inspector/Instructor license; Pennsylvania Emissions Repair Technician license; General Motors (GM) certified technician in all areas of an automobile; Saab Master-certified technician; possesses Pennsylvania teaching Certificate.

MICHAEL STAFFORD

Teaching Assignment: Culinary Arts & Science

B.S. in Business Administration, Delaware Valley University; over twenty-five years industry experience; over twenty years restaurant management experience; ServSafe certified; possesses Pennsylvania teaching certificate.

GREGORY SMITH

Teaching Assignment: Horticulture, Landscape & Design

B.S. in Business with a concentration in Marketing, Mount St. Mary's College; nineteen years industry experience, including seventeen years as general manager of a company specializing in residential and commercial landscaping and hardscaping; certified Interlocking Concrete Pavement Installer; Interlocking Concrete Pavement Institute Certified Instructor; past member of Pennsylvania State University Agricultural Education Advisory Council; Hardscaping Instructor, Pennsylvania State University Agricultural Extension Education; advisor of Middle Bucks Chapter of the Pennsylvania State FFA; chairperson, Pennsylvania State FFA Nursery Landscape Career Development Event; Certified Global Competence in CTE; Participant, Pennsylvania Department of Education Program of Studies Task list for Horticulture; Participant, NOCTI Pennsylvania State Specific Horticulture Certification exam; possesses Pennsylvania teaching certificate.

KATHRYN STROUSE

Assignment: Administrative Director

M.Ed. in Educational Administration, Gwynedd Mercy University; B.S. in Education, West Chester University; twenty-one years educational administration experience; twelve years elementary teaching experience; five years corporate training and employee relations experience; member of Pennsylvania Association of Career and Technical Administrators (PACTA), Association of Career and Technical Education (ACTE), Pennsylvania Association of Elementary and Secondary School Principals (PAESSP); Pennsylvania Association of School Personnel Administrators, and Pennsylvania Association of School Administrators; awarded 2018 Administrator of the Year by Pennsylvania Association for Career and Technical Education PA-(ACTE); possesses Pennsylvania Elementary and Secondary Principal certification and Director of Career and Technical Education certification.

PAMELA SWOYER

Assignment: Work-Based Education Teacher/Coordinator

Masters level coursework for Special Education Certification, Gwynedd Mercy University; M.Ed. in Curriculum, Instruction, and Technology in Education, Temple University; B.S. in Retailing and Visual Communication, Syracuse University; five years broad-based executive, buying, human resources, managerial, training and recruiting experience in the retail industry; President of Bucks and Montgomery County Cooperative Education Association; member of Pennsylvania Cooperative Education Association, American and Pennsylvania Career and Technical Associations, National Association for Curriculum Development, Omicron Tau Theta National Honorary Professional Graduate Society in Career and Technical Education, Temple University; and the Career and; possesses Pennsylvania teaching certificates in Cooperative Education, Marketing Education, Business Education, and Special Education K-12.

FACULTY AND STAFF PROFILES

MICHAEL SYKES

Teaching Assignment: Building Trades Occupations

B.S. in Organizational Studies Degree Program, Neumann University; Graduate of the Williamson College of the Trades; Business Administration coursework at Delaware Valley University; over twenty-nine years of occupational and supervisory experience in construction with an emphasis on home building, home remodeling, land acquisition, site improvement, entitlements, and customer service; OSHA 10 Completion; certified in Green Advantage (Building Green Initiative); National Center for Construction Education and Research (NCCER) Core Curricula Instructor; Safety Committee Fundamentals certificate in Hazard Identification, Suicide Prevention Certificate, Safety Alerts and Beyond; American Ladder Institute Certificates; Quality Management certificate from Penn State University; achievement award for Essentials of Purchasing from Rutgers University; associate recipient of The National Homebuilder of the Year award from the National Association of Homebuilders; possesses Pennsylvania teaching certificate.

LISA VIVIANO

Teaching Assignment: Dental Occupations

A.A. from Manor College; Licensed Expanded Function Dental Assistant; twenty years dental office experience; twelve years teaching experience; member of the American Dental Assistants Association and PA Expanded Function Dental Assistant (EFDA) Association; possesses Pennsylvania teaching certificate.



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