

MIDDLE BUCKS INSTITUTE OF TECHNOLOGY



2014 - 2015 Program of Studies

"GET CONNECTED"



Merging Business, Industry, and Technology

2740 Old York Road • Jamison, PA 18929

December 2013

Dear Parents/Guardians:

Allow me to introduce you to Middle Bucks Institute of Technology (MBIT). As a campus of your school district, your son or daughter has the unique opportunity to complete course work at our school **tuition free** while in high school. Students across America are recognizing the importance of developing a technical foundation along with academic skills before college or work. MBIT continues to be at the forefront of preparing students for greater success in college or in the increasingly competitive workforce.

So you may acquaint yourself with our educational programs, the Program of Studies for the 2014-2015 school year follows for your review. Please take this opportunity to learn more about the twenty-two career & technical programs we offer, including our newest program, Administrative Sciences & Business Technology, as well as a modernized Computerized Drafting & Engineering Graphics program.

Students who are choosing to bundle their electives and enroll at MBIT are realizing such benefits as:

- ✓ Earning industry recognized certifications
- ✓ Earning college credits through numerous articulation agreements with area colleges & universities
- ✓ Confirming their desired career path
- ✓ Securing a solid "Plan B" to ensure multiple opportunities for work in a challenging economy

The best way to fully understand the educational opportunities at MBIT is to experience them firsthand; therefore, we will be hosting a school-wide **Open House** on **Tuesday, January 7, 2014** from **7:00 PM – 9:00 PM**. You will have the opportunity to tour the building, meet with teachers, and see students working in the labs.

In addition, there will be MBIT representatives at the Program Planning Nights in every high school in Centennial, Central Bucks, Council Rock, and New Hope-Solebury School Districts. If you are interested in applying to MBIT, an application form is enclosed. Simply complete the application and forward it to your sending school counselor. The application deadline is **April 1, 2014**. Please note that if your child is currently a student at MBIT, there is no need to complete a new application. A form will be sent home with your student in February/March for you to confirm enrollment at MBIT for the next school year.

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

It is the policy of Middle Bucks Institute of Technology not to discriminate on the basis of race, sex, religion, color, national origin, disability, or limited English proficiency in its educational programs or activities and provides equal access to youth groups and employment as required by Title IX of the 1972 Educational Amendments, Title VI of the Civil Rights Act of 1964 and Section 504 Regulations of the Rehabilitation Act of 1973. For information regarding services, activities, programs and facilities that are accessible to and usable by handicapped persons, or for inquiries regarding compliance with the above non-discriminatory policies, contact Denise Dohoney, Civil Rights Coordinator, Middle Bucks Institute of Technology, 2740 Old York Road, Jamison, PA 18929, 215-343-2480.

Receive e-mail alerts about school cancellations, upcoming events, and more by visiting www.mbit.org and registering!

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



OUR MISSION

Preparing tomorrow's workforce today.

MIDDLE BUCKS INSTITUTE OF TECHNOLOGY
 2740 Old York Road, Jamison, PA 18929
 Phone: 215-343-2480 Fax: 215-343-8626

Table of Contents

Preface: Your Campus at Middle Bucks.....	1
Application & Selection Process.....	1
Program Costs.....	1
Career Assessment.....	1
College & University Connections/SOAR.....	2
Flexible Scheduling Options.....	3
Academic Coursework.....	3
Advancement & Promotion.....	3
The Educational Program - An Overview.....	4
Career Clusters & Pathways:	
Architecture & Construction Career Cluster Pathways:	
• Building Trades Occupations.....	5
• Computerized Drafting & Engineering Graphics.....	6
• Construction Carpentry.....	7
• Electrical & Network Cabling.....	8
• HVAC & Plumbing Technology.....	9
• Practical Environmental Landscaping.....	10
Arts, A/V Technology & Communications Career Cluster Pathways:	
• Commercial Art & Design.....	11
• Multimedia Technology.....	12
Health Science Career Cluster Pathways:	
• Dental Occupations.....	13
• Health Occupations.....	14
• Health Sciences.....	15
Hospitality & Tourism Career Cluster Pathway:	
• Culinary Arts.....	16
Human Services Career Cluster Pathways:	
• Cosmetology.....	17
• Early Childhood Care & Education.....	18
Information Technology Career Cluster Pathways:	
• Administrative Sciences & Business Technology.....	19
• Networking & Operating Systems Security.....	20
• Web Design & Interactive Media.....	21
Law, Public Safety & Security Career Cluster Pathway:	
• Public Safety.....	22
Manufacturing Career Cluster Pathway:	
• Welding Technology.....	23
Science, Technology, Engineering & Mathematics Career Cluster Pathway:	
• Engineering Related Technology.....	24
Transportation, Distribution & Logistics Career Cluster Pathways:	
• Automotive Technology.....	25
• Collision Repair Technology.....	26
Related Programs & Services.....	27-28
Faculty & Staff Profiles.....	29-36

YOUR CAMPUS AT MIDDLE BUCKS

Middle Bucks Institute of Technology is located in Warwick Township on Old York Road 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 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 Middle Bucks experience provides students with a blend of classroom theory, technical applications in state-of-the-art laboratories, and actual 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 ten broad career clusters and operates twenty-two state approved career pathway programs. Approximately 800 students attend the daytime program. In addition to secondary students, the school clientele also 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-four professional educators and thirty support personnel. Instruction is individualized, self-paced, and highly personalized.

Middle Bucks prepares today's students for tomorrow's emerging technologies and provides students with the competitive edge needed to compete in a global marketplace and succeed in college.

APPLICATION AND SELECTION PROCESS

Students must complete the Middle Bucks application process 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, and staff recommendations. **A transcript must accompany the MBIT standard application.** 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 April 1st of the year prior to enrollment. However, applications will be accepted anytime throughout the year. Applications may be obtained from your school counselor or by calling Middle Bucks Institute of Technology at 215-343-2480.

To apply or obtain more information about secondary programs and services, contact a member of the MBIT counseling staff at 215-343-2480 x 249. For more information about adult programs, contact the Adult Education Coordinator at 215-343-2480 x 108. You can also visit our website at www.mbit.org.

PROGRAM COSTS

Students are responsible for a non-refundable \$25 MBIT activity fee, lab fees where applicable, tools, supplies, and clothing for their particular program. The approximate costs associated with each program are listed under the "Program Requirements/Costs" section of each course description.

CAREER ASSESSMENT

Career assessment services are intended to help secondary students and adults make career decisions 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 Guidance Counselor, MBIT's Guidance Counselor at 215-343-2480 x 249, or MBIT's Organizational Advancement Coordinator at 215-343-2480 x 115.

COLLEGE AND UNIVERSITY CONNECTIONS

MBIT has a variety of college and university connections available to students.

Our **partnership agreements** with Bucks County Community College provides students with an opportunity to earn up to 18 credits toward an associate's degree by earning an industry-specific, nationally recognized skills certificate/credential that combines technical training with general education knowledge. These agreements also provide students with the opportunity to earn an additional 15 credits for two years of structured work experience at approved sites. **Five career pathways are eligible for this college partnership:** Automotive Technology, Collision Repair Technology, Cosmetology, Electrical and Network Cabling Technology, and Welding Technology.

Career pathway **articulation agreements** are in place with many postsecondary institutions such as Bucks County Community College, Drexel University, Gwynedd Mercy University, Pennsylvania College of Technology, and the Hussian School of Art. Students can earn from six to twelve credits toward an associate's degree or certification at these or other postsecondary institutions. See each career pathway description for specific college connections.



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 or diploma or certificate programs. SOAR programs lead students into a career pathway that align the secondary courses to a postsecondary program to complete a degree or certificate. SOAR programs prepare today's student for High Priority Occupations (HPO) which include career categories that are in high demand by employers, have higher skill needs, and are most likely to provide family sustaining wages.

The benefits of SOAR include saving money on college tuition, saving time by shortening college attendance, getting on the right career pathway, entering the job market ready, and receiving a consistent, seamless education. 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. Students interested in the POS program are encouraged to ask whether their chosen program is POS approved. Program of Study pathways provide excellent opportunities for students pursuing a career and technical education at MBIT and beyond.

FLEXIBLE SCHEDULING OPTIONS

Middle Bucks attempts to accommodate the scheduling needs of all students through a flexible range of options. The school day at Middle Bucks is divided into two sessions: morning (7:45 a.m. to 10:30 a.m.) and afternoon (11:30 a.m. to 2:15 p.m.). Each session is divided into two 80-minute periods for a total of four periods a day. Morning and afternoon session assignments are made by Middle Bucks 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.) each day. While our programs are designed to be completed in three years, students may attend for a semester (18 wks.) or a year (36 wks.). A fourth year may be scheduled with special permission. Priority will be given to 10th grade students enrolling half-day, two periods each day, for the entire school year. 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, 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 amount of competencies (i.e., 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 not able 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 receive a final grade of F will be required to consider other educational options.

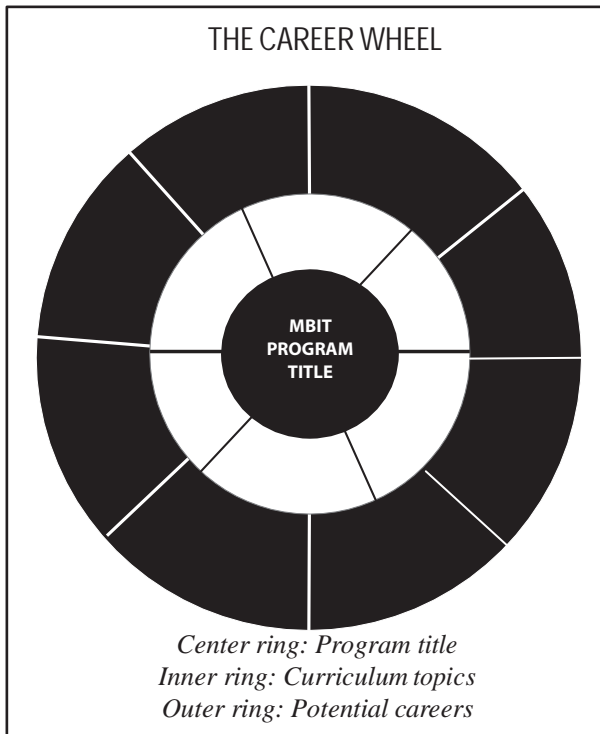
Furthermore, students are expected to supplement their technical program with a rigorous sequence of academic courses at their high school. For most students, this constitutes a minimum three (3) years of academic math, four (4) years of academic English, and two (2) years of lab science. Failure to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

THE EDUCATIONAL PROGRAM

The educational program at Middle Bucks Institute of Technology is organized into ten career clusters and twenty-two career pathways (i.e., major courses of study).

Typically, students enroll in one career pathway as their major field of study, then complete a core set of courses common to the career cluster and a highly rigorous technical sequence of courses related to their career pathway. Students may complete additional specialized courses as they advance beyond the standard secondary curriculum.

“The career cluster model is recognized as one of the most effective educational initiatives for preparing students for the new economy.”



Architecture & Construction Career Cluster

Pathways:

- Building Trades Occupations
- Computerized Drafting & Engineering Graphics
- Construction Carpentry
- Electrical & Network Cabling
- HVAC & Plumbing Technology
- Practical Environmental Landscaping

Arts, A/V Technology Communications Career Cluster

Cluster Pathways:

- Commercial Art & Design
- Multimedia Technology

Health Science Career Cluster Pathways:

- Dental Occupations
- Health Occupations
- Health Sciences

Hospitality & Tourism Career Cluster Pathway:

- Culinary Arts

Human Services Career Cluster Pathways:

- Cosmetology
- Early Childhood Care & Education

Information Technology Career Cluster Pathways:

- Administrative Sciences & Business Technology
- Networking & Operating Systems Security
- Web Design & Interactive Media

Law, Public Safety & Security Career Cluster

Pathway:

- Public Safety

Manufacturing Career Cluster Pathway:

- Welding Technology

Science, Technology, Engineering & Mathematics Career Cluster Pathway:

- Engineering Related Technology

Transportation, Distribution & Logistics Career Cluster Pathways:

- Automotive Technology
- Collision Repair Technology

Architecture & Construction Career Cluster

BUILDING TRADES OCCUPATIONS

Teacher: Michael Sykes

This nationally recognized and RCA (Residential Construction Academy) 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 buildings and other structures. The program provides instruction in a number 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 also learn to use hand and power tools, construction materials, estimating, blueprint reading, and construction safety. Students will utilize their knowledge and skills by assisting with the Student-Build House Project. Graduates of this program are prepared for employment in the construction fields or may pursue more specialized training through an apprenticeship and/or post-secondary education.

Industry Certifications

OSHA 10 Hour CareerSafe Safety

Completion of the RCA Training Program that culminates in a national registry of students qualified for employment

College Advanced Credits

This program has formal articulation agreements with Commonwealth Technical Institute, which provides 10 advanced credits; Orleans Technical Institute, which provides 4.5 advanced credits; Luzerne Community College, which provides 8 advanced credits towards an Associate of Applied Science degree in Building Maintenance Technology; and Pennsylvania College of Technology, a Penn State affiliate, that provides advanced credits upon review.

Program

Recommendations

- Read and interpret technical material
- Mathematics fundamentals
- Ability to work in various weather conditions
- Physical stamina
- Eye/hand coordination
- Ability to work in teams
- Ability to adhere to strict safety regulations



Program

- #### Requirements/Costs:
- Appropriate uniform attire (approximately \$75)
 - Tool belts and selected tools (approximately \$150)
 - OSHA 10 hour Safety Certification (approximately \$25)

COMPUTERIZED DRAFTING & ENGINEERING GRAPHICS

Teacher: Craig Malinowski

This nationally recognized and ADDA (American Drafting and Design Association) 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 Drafting (CAD) techniques using the latest versions of AutoCAD, Autodesk Revit, and Google Sketchup software packages. 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. Our goal is to provide drafting students with the occupational experience, higher academic knowledge, and skills required to perform successfully in high-wage, high-skill positions. Students will gain industry credentials and/or be eligible to sit for credentialing exams, which provide skills portability and career mobility by enhancing lateral and upward career moves. The curriculum has been approved as meeting current standards by the program’s individual Occupational Advisory Committee, which is made up of experts who are current within the specific fields of drafting. The Computerized Drafting & Engineering Graphics program aligns with business and industry credentialing, local employers, and the Workforce Investment Board. It is through the Computerized Drafting & Engineering Graphics program that the “drafting technician” is a high priority occupation as sanctioned by the Bucks County Workforce Investment Board. This program is designed for students who plan to pursue an Associate or Bachelor Degree in Engineering or Architecture.

Industry Certifications

OSHA 10 Hour CareerSafe Safety
Green Advantage

Apprentice Drafter and Drafter through ADDA

College Advanced Credits

This program has formal articulation agreements with Thaddeus Stevens College of Technology, which provides 9 advanced credits towards an Associate Degree in Computer Aided Drafting Technology; ITT Technical Institute, which awards up to 4.5 advanced credits towards an Associate Degree in Applied Science; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

Read and interpret technical material at grade level
Basic computer skills



Program

Requirements/Costs
Uniform (approximately \$12)
OSHA 10 Hour Safety certification (approximately \$25)

Architecture & Construction Career Cluster

CONSTRUCTION CARPENTRY

Teacher: Anthony Rogers

This nationally recognized and RCA (Residential Construction Academy) 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. In addition, students receive core curriculum training through the National Center for Construction Education and Research (NCCER) culminating in certification opportunities. A full-scale student-built house is constructed as a project where 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.

Industry Certifications

- OSHA 10 Hour CareerSafe Safety
- Carpentry Level 1 through NCCER
- Carpentry Level 2 through NCCER

Completion of the RCA Training Program that culminates in a national registry of students qualified for employment

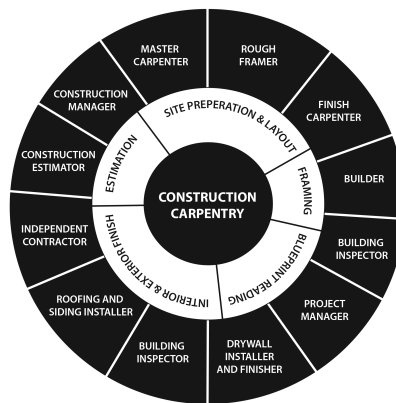
College Advanced Credits

This program has formal articulation agreements with Triangle Tech, which guarantees enrollment in their chosen program of study pending successful completion of requirements; Clarion University of Pennsylvania, which provides 9 advance credits; Thaddeus Stevens College of Technology, which provides 9 advanced credits; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

- Read and interpret technical material
- Mathematics fundamentals
- Ability to work in various weather conditions
- Physical stamina Eye/hand coordination Ability to work in teams
- Ability to adhere to strict safety regulations



Program

- #### Requirements/Costs
- Appropriate uniform attire (approximately \$50)
 - Tool belt and selected tools (approximately \$50)
 - OSHA 10 hour Safety Certification (approximately \$15)

Architecture & Construction Career Cluster

ELECTRICAL & NETWORK CABLING

Teacher: Randall McDowell

This program prepares individuals to apply technical knowledge and skills necessary to lay out, assemble, install, operate, maintain, test and repair electrically-energized residential, commercial and industrial systems, DC and AC motors, generators, transformers, controls, programmable logic controllers, and electrical distribution panels. Instruction emphasizes the application of mathematics and science, electron theory and Ohm's Law. The program includes instruction in single and three phase, delta and wye systems; both low (110 v. - 220 v.) and high voltages (440 v. and higher); reading and interpretation of commercial and residential construction wiring codes and specifications (i.e., National Electrical Code); installation and maintenance of wiring; service; and distribution networks within large construction complexes. Students will also receive instruction in solar and wind generation. They will build circuits powered by a 600 watt solar panel and a 400 watt windmill, and will be able to trace the distribution of the power generated by these green technology components. Students will be prepared for entry-level employment in the electrical and cabling industry in residential, commercial, and industrial settings. The program provides an excellent foundation of technical knowledge for college and/or direct employment.

Industry Certifications

OSHA 10 Hour CareerSafe Safety

C-Tech Introduction to Network Cabling in Copper Based Systems and Fiber Based Systems

Pennsylvania Builders Association (PBA) Skills Certificate

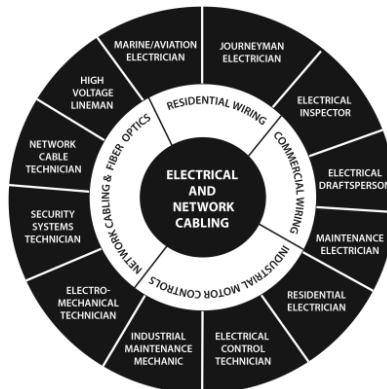
College Advanced Credits

This program has a formal partnership with Bucks County Community College, which provides 18 technical credits towards an Associate Degree in Occupational Studies. This program also has formal articulation agreements with Rosedale Technical Institute, which provides 9 advanced credits towards an Associate Degree in Specialized Technology; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

Read and interpret technical material at grade level
Mathematics fundamentals
Color perception
Physical stamina
Eye/hand coordination



Program

Requirements/Costs
Appropriate uniform attire (approximately \$50)
Tool belt and selected tools (approximately \$100)
OSHA 10 hour Safety Certification (approximately \$20)

Architecture & Construction Career Cluster

HVAC & PLUMBING TECHNOLOGY

Teacher: Jeffrey Muschlitz

The HVAC (Heating, Ventilation, and Air Conditioning) and Plumbing Technology program has been designed around a business/ industry and national skill standards model. This program uses 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 a highly technical instructional program that prepares them for an entry-level technician 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, ventilating, air conditioning, refrigeration and plumbing systems; installation of rough-in plumbing system 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; installation of residential heating systems; installation of refrigeration systems; blueprint reading; drain cleaning methods; HVAC trouble shooting methods and component replacement. Instruction also includes the use of ICC 2012 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 first year students in this program will study plumbing. During the second year of the program, students will focus their studies by selecting either the HVAC pathway or the Plumbing pathway.

Students should expect a challenging learning environment both mentally and physically. Students with a high level of math and mechanical science skills will be well prepared for this technical curriculum.

Industry Certifications

OSHA 10 Hour CareerSafe Safety
Pennsylvania Builders Association (PBA) Skills Certificate
EPA 609 Certification for Refrigerant Recycling and Recovery
NATE (North American Technicians Excellence) Core and Specialty Exams
Gastite and Tracpipe Flexible Gas Piping
American Ladder Institute Safety Training

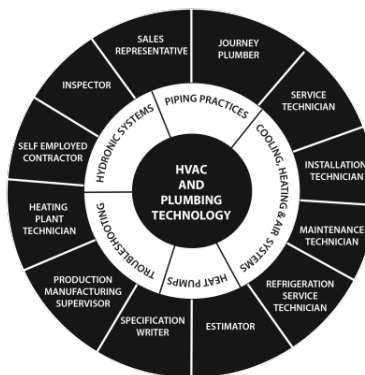
College Advanced Credits

This program has a formal articulation agreement with Thaddeus Stevens College of Technology, which provides 10 advanced credits; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

Read and interpret technical material at grade level
Algebra I
Color perception Physical stamina Eye/hand coordination



Program

Requirements/Costs

Appropriate uniform attire, shirt, jeans and boots (approximately \$60)
Selected tools and reference materials (approximately \$75)
Refrigerant Recovery License Exam Fees (approximately \$25)
OSHA 10 hour Safety Certification (approximately \$25)

PRACTICAL ENVIRONMENTAL LANDSCAPING

Teacher: Gregory Smith

The Practical Environmental Landscaping program emphasizes the knowledge, understanding, and application necessary to establish, maintain, and manage landscaping, hardscaping, and horticultural enterprises. Through hands-on activities, the program will prepare students in all phases of landscape/hardscape design and installation, horticulture, nursery operation, and turf management. With an emphasis on residential home installation, students will learn the proper use of hand and power tools, skid steering loaders, construction materials, measuring and estimating, blueprint/plan reading, and jobsite safety. Students completing the Practical Environmental Landscaping will have the knowledge and skills necessary to begin a career in the landscaping, hardscaping, nursery and turf management fields. Graduates will also have the ability to pursue associate or baccalaureate degrees in horticulture related fields.

Industry Certifications

- OSHA 10 Hour CareerSafe Safety
- Pennsylvania Pesticide Application
- Pennsylvania Core Pesticide License
- Safe Tractor and Machinery Operator
- PLANET Landscape Safety Training

College Advanced Credits

This program has a formal articulation agreement with Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

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



Program

Requirements/Costs

- Appropriate uniform attire (approximately \$50)
- 10 hour Safety Certification (approximately \$18)
- PLANET Landscaping Training Safety Certifications (approximately \$25)
- Activity Fees (approximately \$50)

Arts, A/V Technology & Communications Career Cluster

COMMERCIAL ART & DESIGN

Teacher: Bradley Rosenau

This program in the visual arts prepares the serious art student to use artistic techniques to visually communicate ideas and information to business and consumer audiences using graphics and illustrations for print, web, and video media. The structure of the class simulates a professional graphic design studio. This course will develop an art student's skill and knowledge in the foundations of commercial art and allow them to explore in-depth, a wide variety of art techniques and processes in both traditional and state of the art simulations including; hand drawing and illustration, color theory and application, digital imaging and digital file management, design layout and production, typography, digital photography, silk screen printing techniques, safety and the professional preparation of both traditional and electronic portfolios for the workforce or college. Software applications include Adobe Creative Suite: Photoshop, Illustrator, InDesign, and Flash along with the iLife software.

Industry Certifications

Adobe Certified Associate credential in Visual Communications for Photoshop, Illustrator, InDesign, Flash or Dreamweaver

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides up to 6 advanced credits toward an Associate Degree with a major in Graphic Design. This program also has formal articulation agreements with Hussian School of Art, which provides 7.5 advanced credits toward an Associate in Specialized Technology degree for Commercial Art; the Art Institute of Pittsburgh, which provides advanced credits upon review; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

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



Program

- #### Requirements/Costs
- Portfolio (approximately \$40)
 - Art supply kit (approximately \$20)
 - Textbook at each grade level (approximately \$30 each)

Arts, A/V Technology & Communications Career Cluster

MULTIMEDIA TECHNOLOGY

Teacher: Christopher Tully

This program introduces students to the art and science of multimedia technology. Students learn several types of media productions while developing a full understanding of the hardware, software, and equipment necessary for delivering effective presentations for business, education, and entertainment. Instruction includes training in concept design, graphic design, web design, video production, television production, audio production, electronic computer imaging, motion graphics, animation and presentation technology using Apple computers. A variety of software applications are taught including Microsoft Office, Pages, Keynote, iBooks Author, Final Cut Pro, Soundtrack Pro, Motion, Color, iTunes, GarageBand, iPhoto, iWeb, Photoshop, Illustrator, Dreamweaver, and After Effects. Using state-of-the-art digital technology, students apply their knowledge and skills to create quality media productions for broadcast, DVD, Web, corporate video-based communications, and computer-based presentation technology. In addition, students receive instruction in Internet technology through the use of social networking and Web 2.0 applications. This course provides comprehensive hands-on experience with multimedia productions and Internet through instruction in conceptualization, project management, budgeting and distribution.

This program will enhance students' computer literacy and increase their communication, artistic, and presentation skills in preparation for college and employment. The technical curriculum incorporates many of the academic standards in math, reading, and writing through the application of computation, reading comprehension, and writing skills. The program also teaches the fundamentals of leadership, ethics, accountability, adaptability, personal productivity, self-direction, and social responsibility. The course work is centered on the framework of 21st Century learning which includes their core subjects, creativity and innovation, critical thinking and problem solving, communication and collaboration, media literacy and life and career skills.

Industry Certifications

Apple Certified Pro and Adobe Certified Associate

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides 6 advanced credits towards an Associate Degree with a major in Cinema/Video or 6 advanced credits towards an Associate Degree with a major in Multimedia. This program also has a formal articulation agreement with Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program Recommendations

- Read and interpret technical material at grade level
- Mathematics fundamentals
- Basic computer skills
- Effective communication skills
- Manual dexterity
- Physical stamina
- Ability to work independently, as well as a member of a group
- Strong depth and color perception
- Creative/Artistic ability



Program Requirements/Costs

- Kit of selected computer supplies and educational materials (approximately \$150)
- Appropriate uniform attire (approximately \$30)

Health Science Career Cluster

DENTAL OCCUPATIONS

Teacher: Lisa Cuffari

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, oral pathology, chair-side 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, chair-side assisting, 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 practical hands-on experience in the lab or clinical setting.

Industry Certifications

Radiation Health and Safety (RHS)

Infection Control (ICE) through the Dental Assisting National Board, Inc. (DANB)

CPR through the American Red Cross

College Advanced Credits

This program has formal articulation agreements with Manor College, which provides 9 advanced credits; Harcum College, which provides 9 advanced credits; Westmoreland County Community College, which provides 8 advanced credits; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

- Oral expression and comprehension
- Written expression
- Near vision
- Hand-eye coordination
- Finger dexterity
- Mathematic fundamentals
- Read and interpret technical material



Program

Requirements/Costs

- Physical Examination, including Hepatitis B and Tuberculin Skin Test (at student's expense)
- Appropriate uniform attire (approximately \$75)
- DANB RHS Exam Fees (approximately \$175)
- Workbooks (approximately \$125)
- Activity fees (approximately \$65)

Health Science Career Cluster

HEALTH OCCUPATIONS

Teacher: Gina Boccella

This program is designed to prepare students for entry-level careers in the health field. Students are provided with both clinical and shadowing experiences in long-term care facilities and doctors' offices in the area, including Neshaminy Manor Long-Term Care Facility. These opportunities further enhance the student's learning experience and assist in the transition to employment in a variety of health care settings. The core curriculum includes Nurse Aide and Medical Assisting components with an overview of health careers, basic anatomy and physiology, medical terminology, clinical laboratory procedures, standard precautions, legal and ethical aspects of health care, and communications skills. In addition, students are provided instruction to qualify them for certification in First Aid and CPR. Leadership skills and opportunities are encouraged through active involvement in HOSA: Future Health Professionals, our state and nationally recognized student organization.

Industry Certifications

Pennsylvania Certified Nurse Aide
American Heart Association CPR for healthcare providers with AED
Oxygen Administration
Fire Safety
First Aid

College Advanced Credits

This program has formal articulation agreements with Mercyhurst University, which provides 12 advanced credits towards an Associate of Science degree; Harcum College, which provides 7 advanced credits towards an Associate of Science degree; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program Recommendations

Oral expression and comprehension
Written expression
Near vision
Hand-eye coordination
Finger dexterity
Mathematic fundamentals
Read and interpret technical material



Program Requirements/Costs

Physical Examination, including Hepatitis B and Tuberculin Skin Test (at student's expense)
Appropriate uniform attire (approximately \$75)
DANB RHS Exam Fees (approximately \$175)
Workbooks (approximately \$125)
Activity fees (approximately \$65)

Health Science Career Cluster

HEALTH SCIENCES

Teacher: Marsha Moyer

This program is designed for the college-bound student whose career plans involve the medical and allied health field. This program provides core instruction in the Health Care field including: medical terminology and abbreviations, anatomy and physiology in health and disease, medical ethics and legalities, clinical laboratory procedures and skills, vital signs, current issues in health care, standard precautions, cultural awareness, nutrition, growth and development, and patient, environmental and personal safety. The Health Sciences program participates in clinical experiences at area hospitals and health care facilities, including Abington Memorial Hospital, which affords students the opportunity to observe procedures, meet patients, and learn about technology and the educational credentials required for entry into various fields. Staff members from area hospitals provide seminars and guest lectures. Leadership skills are developed through HOSA: Future Health Professionals, our state and nationally recognized student organization. Students considering this program should take a concentration of planned courses in mathematics and science. This course is weighted as an accelerated course for Council Rock students.

Industry Certifications

American Heart Association CPR for healthcare providers with AED
Oxygen Administration
Fire Safety
First Aid

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which awards 3 equivalent credits towards Basic Human Anatomy. This program also has formal articulation agreements with Gwynedd Mercy University, which provides variable advanced credits toward an Associate of Arts or Bachelor of Science degree; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program Recommendations

Read and interpret technical material at grade level
Advanced Math
Laboratory Science



Program Requirements/Costs

Annual Physical Examination, with documentation of current immunizations, including Hepatitis B vaccination and two-step Tuberculin Skin Test (at student's expense)
Annual Clearances: (approximately \$30)
Act 34 – Compliance-Criminal Record Clearance
Appropriate FBI Fingerprinting
Pennsylvania Child Abuse History Clearance
Appropriate uniform for class and clinical rotation (approximately \$80)
Workbooks (approximately \$120)
Activity fees (approximately \$60)

Hospitality & Tourism Career Cluster

CULINARY ARTS

Teachers: Mark Gage and Michael McCombe

This ACF (American Culinary Federation) 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, menu and banquet planning, food and beverage purchasing, quality control, cost analysis, safety, and sanitation. Students learn the safe and proper use of hand and power tools 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. Components of the program include commercial baking and pastry, catering, food management, chef preparation, institutional foods, meat cutting, cooking methods, nutrition, safety, and sanitation. 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.

Industry Certifications

ServSafe

Certified Junior Culinarian through ACF

Certified Secondary Graduate through ACF

College Advanced Credits

This program has a partnership agreement with Bucks County Community College, which provides 15 credits towards an Associate Degree with a major in any Hospitality program of study. This program also has formal articulation agreements with the Culinary Institute of America, which provides 1.5 advanced credits towards a degree in Culinary Arts or Pastry and Baking Arts; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

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



Program

Requirements/Costs

Appropriate uniform attire (approximately \$20)
Workbook (approximately \$20)
Industry Certification Testing Fees (approximately \$60/test)

Human Services Career Cluster

COSMETOLOGY

Teachers: Jo Ann McLaughlin and Maura Duncan

This program is designed in compliance 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. Also part of the curriculum are: training in shampooing, scalp treatments, hair styling, cutting, tinting and bleaching, chemical restructuring, permanent waving, facials, manicures and pedicures, nail technology, hand and foot massaging, bacteriology, chemistry, electricity, anatomy and physiology, hygiene, sanitation, salon management, and communication skills. Students completing all of the requirements, including 1,250 hours of instruction, are eligible to receive selected PA 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 in teaching. Other options include collegiate study in business or marketing, providing employment opportunities as manufacturers' representatives and/or small business owners.

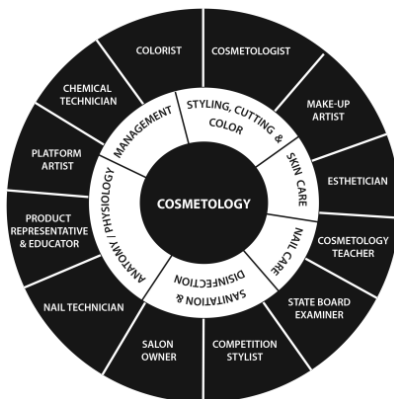
Industry Certifications

Pennsylvania Cosmetology Licenses

College Advanced Credits

This program has a formal partnership with Bucks County Community College, which provides 18 technical credits towards an Associate Degree in Occupational Studies. This program also has an articulation agreement with Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

- Program Recommendations**
- Read and interpret technical material
 - Mathematics fundamentals including liquid measurements
 - Fine motor skills
 - Color perception and accurate vision
 - Good communication and interpersonal skills
 - Ability to adhere to strict safety regulations
 - Good organizational skills



- Program Requirements/Costs**
- Social Security # or Federal # (required to record hours)
 - Completion of 9th grade Cosmetology Kit (approximately \$630)
 - Industry Certification Testing Fees (approximately \$149)
 - Must serve as both an operator and a peer model for all reversible services

Human Services Career Cluster

EARLY CHILDHOOD CARE & EDUCATION

Teacher: Lise Rich

This program prepares students for a variety of careers working with children, and provides both theory and practical experiences. Students assist in the operation of a laboratory childcare center located at Middle Bucks, Li'l Bucks Partners in Learning, which is licensed as a Pennsylvania-approved childcare center and a Keystone Star 3 center. Students age 16 or older are involved in 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 learning activities for the toddlers and preschoolers. Classroom instruction includes content on child growth and development, guidance and discipline techniques, nutrition, health and safety of young children, developing lesson plans, observation skills, and professional skills. The program is aligned to the Child Development Associate (CDA) requirements as well as Pennsylvania's Program of Studies for Child Care. In the third year of the program, students complete clinical experiences working with infants, toddlers, preschoolers, school-aged children, or special needs children.

Industry Certifications

Assistant Group Supervisor
Child Development Associate (CDA)

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides 6 advanced credits toward an Associate Degree with a major in Early Childhood Education. This program also has formal articulation agreements with Harcum College, which provides 9 advanced credits towards an Associate of Arts degree in Early Childhood Education; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

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



Program

Requirements/Costs

Physical Examination including TB test (at student's expense)
Act 34 – Criminal record clearance (approximately \$10)
Act 151 – Child abuse clearance (approximately \$10)
Two written references
Age verification

ADMINISTRATIVE SCIENCES & BUSINESS TECHNOLOGY

Teacher: Steven Guinan

The Administrative Sciences & Business Technology program is designed to prepare students to support the functions of daily business activities. Students will learn procedures and technology related to business management, entrepreneurship, marketing, and finance. By providing high-level administrative support in conducting research, preparing statistical reports, handling information requests, and performing clerical functions such as preparing correspondence, receiving visitors, arranging conference calls, and scheduling meetings, students will acquire skills necessary in any business or office environment. Students will learn to operate a variety of office equipment, such as fax machines, photocopiers, scanners, videoconferencing and telephone systems. Software programs taught include Microsoft Word, Excel, PowerPoint, Access, and Publisher.

Students will learn the significant lessons and business functions involved in running a successful school-based enterprise, as well as the interpersonal skills required in any administrative position. Students will study accounting, research, promotion, planning, managing, and selling; then learn to translate that knowledge into success in their own school store. Students also will learn basic accounting, including recording transactions in a general journal, financial statements, adjusting and closing entries, and preparing payroll records. Computerized accounting is introduced using QuickBooks Pro. An opportunity to develop a business plan and market a business is included. Instruction on teamwork, professionalism, public speaking, and presenting is also offered to give students the essential soft skills needed in today's workforce.

Industry Certifications

Microsoft Office Specialist (MOS) in Word, Excel, Access, PowerPoint, and Outlook

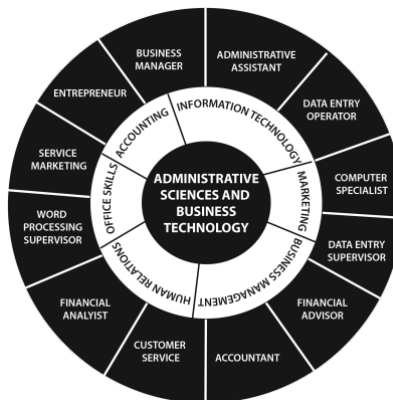
College Advanced Credits

This program has formal articulation agreements with Lackawanna College, which provides 9 advanced credits towards an Administrative Office Professional Certificate; Clarion University of Pennsylvania, which provides 9 advanced credits towards an Associate of Applied Science degree; Montgomery County Community College, which provides 9 advanced credits toward an Associate of Applied Science degree; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

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



Program

Requirements/Costs

Appropriate uniform attire (approximately \$20)
Textbooks (approximately \$150 to begin student's professional library)
Industry Certification Testing Fees (approximately \$60/test)

NETWORKING & OPERATING SYSTEMS SECURITY

Teacher: Thomas Omerza

The three year student in this program will study the following topics: *CompTIA A+* certification, an international, vendor-neutral certification recognized by major hardware and software vendors, distributors, and resellers which validates the latest skills needed by today’s computer support professionals; *CompTIA Network+* certification, in which students learn the technology and theory behind local area network (LAN) through design and implementation; *CompTIA Linux+*, in which students learn the fundamentals of an open source code operating system and learn to incorporate those into a heterogeneous network; *Microsoft Windows 7*, in which students learn the integral working processes of the client operating system in preparation for certification; *Microsoft Windows Server 2008*, in which students will obtain the knowledge and skills necessary to install, configure, administer, and support the primary services in the Microsoft Windows Server 2008 operating system; *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; and *Introduction to Wide Area Networks (WAN)*, in which students learn about the ways large-scale networks are built, configured, and maintained. Students will be introduced to *Virtual Computing* and its uses throughout the computer industry, as well as to *Computer Forensics*, a branch of forensic science pertaining to legal evidence found in computers and digital storage media. Uses of computer forensics include: legal cases, analysis of computer systems or software failure, analysis of a computer system after a break-in; gathering of evidence against an employee whom an organization wishes to terminate, and to gain information about how computer systems work for the purpose of debugging, performance optimization, or reverse-engineering. In addition, students will learn about *Network Cabling Technology*, with instruction including blueprint reading, copper cabling systems, connectors, grounding, bonding, and electrical protection; termination functions, safety, and professionalism. Middle Bucks Institute of Technology is an authorized Microsoft IT Academy.

Industry Certifications

CompTIA’s A+, Network+, Linux+, and Security+

Microsoft Certified Professional (MCP) for Windows 7 and Windows 2012 Server or Windows 2008 Server
Certified Data Recovery Professional (CDRP)

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides up to 8 advanced credits towards an Associate Degree with a major in Networking Technology, as well as additional credits based on certifications obtained. This program also has formal articulation agreements with Thaddeus Stevens College of Technology, which provides 9 advanced credits towards an Associate Degree in Computer and Network Systems Administration; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

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



Program

Requirements/Costs

Textbook (approximately \$195 to begin student’s professional library)
Industry Certification Testing Fees (approximately \$130 per test)

Information Technology Career Cluster

WEB DESIGN AND INTERACTIVE MEDIA

Teacher: Steven Guinan

Student 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. They learn advanced skills in photo-editing using Adobe Photoshop, animation using Adobe Flash, 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, student will have the opportunity to learn coding techniques and development with HTML, the language of the web and the foundation for building websites. Students also study programming languages and XHTML to create dynamic web pages. Throughout the course, students create and design web sites for a variety of clients in the community. This program includes instruction in 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 technologies.

If you are a creative individual who enjoys art and working with computers, web design could be an exciting, rewarding career for you. Graduates of the web design class will most likely pursue post-secondary education. However, it is possible for very talented students to enter the workforce upon graduating. Designers working in this field enjoy a creative work environment.

Industry Certifications

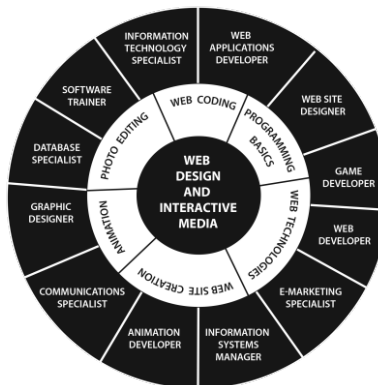
- Adobe Certified Associate (ACA) in Dreamweaver, Photoshop, and Flash
- World Organization of Webmasters (WOW)
- Microsoft Office Specialist (MOS) in Access and Excel

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides up to 9 advanced credits toward an Associate of Arts degree. This program also has formal articulation agreements with Manor College, which provides 9 advanced credits towards an Associate of Science degree in Computer Programming, Special Application; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program Recommendations

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



Program Requirements/Costs

- Textbooks (approximately \$150 to begin student's professional library)
- Industry Certification Testing Fees (approximately \$60/test)

Law, Public Safety & Security Career Cluster

PUBLIC SAFETY

Teacher: John Fala

The Public Safety program is operated in partnership with the Bucks County Emergency Services Division, and designed to prepare students for careers in four broad public safety areas - law enforcement, fire protection, emergency health services, and security and loss prevention. Students will study the following topics: criminal justice system, including juvenile justice and delinquency, corrections, and judiciary; police science including investigative, patrol, traffic and crowd control procedures and forensics; physical and mental fitness including self-discipline, defensive tactics and arrest techniques; fire science including prevention, firefighting and rescue techniques, and hazardous materials; emergency medical services including CPR/AED, EMT, dispatch, and first responder techniques; security and loss prevention as it applies to commercial, industrial and other corporate settings; vehicle and equipment use, maintenance and safety.

Through report writing, research, and information retrieval, students will apply and refine their communication and computer skills. The curriculum will include discussions 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. The learning experience will be further enriched with a host of guest lecturers and visiting instructors from a variety of agencies and colleges. This program provides an excellent foundation from which to pursue a two or four-year college and ultimately a career in public safety.

Industry Certifications

CPR & AED (Automated External Defibrillator) through the American Heart Association
First Aid
OCAT (pepper spray)
Expandable Baton
MOAB (Management of Aggressive Behavior)
PATH (Practical and Tactical Handcuffing)
Firefighter I and Emergency Medical Technician

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides 9 advanced credits based on the respective program of study. This program also has formal articulation agreements with ITT Technical Institute, which provides 18 advanced credits towards an Associate of Applied Science degree in Criminal Justice; CHI Institute, which provide up to 23 advanced credits towards an Associate in Specialized Business degree in Criminal Justice; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

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



Program Requirements/Costs
Appropriate uniform attire (approximately \$170)
Act 34 – Criminal record clearance (approximately \$10)
Physical exam (at student's expense)

Manufacturing Career Cluster

WELDING TECHNOLOGY

Teacher: Paul Carney

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 CNC programming welding processes. Students are trained in the 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) codebook will be practiced. Students may pursue advanced studies at the postsecondary level in fields such as, welding engineering, metallurgy, structural design, energy technology, underwater welding, quality control and inspection, as well as apprenticeships.

Industry Certifications

OSHA 10 Hour CareerSafe Safety
Entry-Level and/or Advanced Level AWS

College Advanced Credits

This program has a formal partnership with Bucks County Community College, which provides 18 technical credits towards an Associate Degree in Occupational Studies. This program also has formal articulation agreements with Clarion University of Pennsylvania, which provides 9 advanced credits; Northampton Community College, which provides 9 advanced credits towards a Welding Technology Specialized Diploma or towards an Associate in Applied Science degree in Applied Quality and Standards; and Pennsylvania College of Technology, a Penn State affiliate, provides advanced credits upon review.

Program Recommendations

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



Program Requirements/Costs

Appropriate uniform attire including steel-toed safety shoes (approximately \$75)
Textbook and Lab Manual (approximately \$60)
Industry Certification Testing Fees (TBD)
OSHA 10 hour Safety Certification (TBD)

Manufacturing Career Cluster

ENGINEERING RELATED TECHNOLOGY

Teacher: Allan Roberts

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 ERT 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 help students prepare to enter a two or four-year college or technical school. The Amatrol System helps 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 ERT 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. They will study electro-mechanical systems, robotics, electrical and electronic theory, thermal heat, and fluid and pneumatic power. Students 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. Students will learn the problem-solving process, to think critically, and work in teams.

Industry Certifications

OSHA 10 Hour CareerSafe Safety
SolidWorks

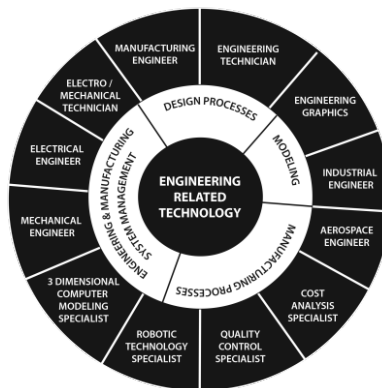
College Advanced Credits

This program has formal articulation agreements with Drexel University, which provides 10 advanced credits towards its Applied Engineering Technology program, and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

Read and interpret technical material at grade level
Algebra I Laboratory Science



Program

Requirements/Costs
Workbooks (approximately \$125)

Lab coat (approximately \$40)
Lab supplies (approximately \$75)

OSHA 10 hour Safety Certification (approximately \$25)

Transportation, Distribution & Logistics Career Cluster

AUTOMOTIVE TECHNOLOGY

Teachers: Paul Ciarlone and Robert Schwarz

This nationally recognized and ASE/NATEF (Automotive Service Excellence/National Automotive Training Education Foundation) accredited instructional program prepares students to engage in the diagnosis, servicing, and maintenance of all types of automobiles. 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 entry-level service technicians in new car dealerships or related automotive businesses. Students who pursue advanced technical training at the postsecondary level will find an array of career opportunities in service, management, and entrepreneurship.

The Automotive Technology program has been recognized by the Motor Vehicle Manufacturing Association Advisory Council and the Association for Career and Technical Education as one of the best automotive programs in the country.

Industry Certifications

- ASE Technician
- Pennsylvania Safety Inspection
- Pennsylvania Emission Inspection
- EPA 609 Certification for Refrigerant Recycling and Recovery
- S/P2 Certificates for Safety and Pollution

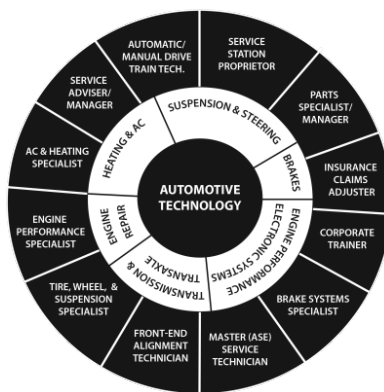
College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides 18 technical credits towards an Associate Degree in Occupational Studies. This program also has formal articulation agreements with Northampton Community College, which provides up to 9 advanced credits toward a specialized diploma or an Associate Degree in Applied Science; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program

Recommendations

- Oral Comprehension
- Read and Interpret Technical Material
- Analytical and Critical Thinking
- Mathematics applications including: Arithmetic, Algebra and Geometry
- Understanding of Electronics and Computers
- Complex Problem Solving Skills
- Aptitude for Mechanical and Scientific Theory
- Ability to work in Cramped Spaces and Awkward Positions
- Manual and Finger Dexterity – Eye/Hand coordination



Program

Requirements/Costs

- Appropriate uniform attire including work shirt, pants and shoes (approximately \$100)
- Textbooks and Lab Manuals (approximately \$190)
- Industry Certification Testing Fees (\$30.00)
- Pennsylvania Emission Inspection License Fee (approximately \$65)

Transportation, Distribution & Logistics Career Cluster

COLLISION REPAIR TECHNOLOGY

Teachers: Arnold Jazlovietcki

Students learn how to perform many activities from repairing small dents to rebuilding the bodies of wrecked or damaged vehicles. Students learn to examine damaged vehicles and estimate cost of repairs; remove, repair and replace body panels, accessories, electrical and hydraulic devices, grills, trim and automotive glass, and straighten unibody and conventional automobile frames using state-of-the-art digital/laser and 3-dimensional measuring systems. 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 learn the proper use of power and hand tools, welding processes and techniques, and safety. Students will be prepared to enter the auto body and collision industry as entry-level technicians. Management, service and business ownership are career paths that many graduates successfully pursue. This program is ASE/NATEF (Automotive Service Excellence/National Automotive Training Education Foundation) accredited across all five recognized curriculum areas including 1) Structural Analysis and Damage Repair, 2) Non-Structural Analysis and Damage Repair, 3) Mechanical and Electrical Components, 4) Plastics and Adhesives, and 5) Painting and Refinishing. Furthermore, this ASE-approved program utilizes the industry standard I-CAR Live curriculum.

The Automotive Collision Technology pathway has also been recognized by the Motor Vehicle Manufacturing Association Advisory Council and the Association for Career & Technical Education as one of the best automotive programs in the country.

Industry Certifications

ASE Technician
Pennsylvania Safety Inspection
Pennsylvania Emission Inspection
EPA 609 Refrigerant Recycling and Recovery

College Advanced Credits

This program has a formal partnership agreement with Bucks County Community College, which provides 18 technical course credits towards an Associate Degree in Occupational Studies. This program also has formal articulation agreements with Thaddeus Stevens College of Technology, which provides 12 advanced credits; and Pennsylvania College of Technology, a Penn State affiliate, which provides advanced credits upon review.

Program Recommendations

Read and interpret technical materials
Mathematics fundamentals, including linear and liquid measurements
Color and size perception
Physical stamina
Eye/hand coordination
Organizational skills
Adhere to strict safety regulations



Program Requirements/Costs

Appropriate equipment / uniform attire (approximately \$172)
Industry Certification Testing Fees (approximately \$36 per test)

RELATED PROGRAMS AND SERVICES

Student Support Services

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

- Academic Remediation
- Career Guidance and Counseling
- Career Assessment and Development
- Equity Services for Nontraditional 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 his/her success. These services include remedial assistance in math, reading, writing, technical skills, job seeking and keeping skills, communications 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 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 cooperative 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 & Technical Student Organizations

Career & Technical Student Organizations (CTSOs) are an integral part of the educational program at Middle Bucks. 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 one of the following organizations – SkillsUSA, HOSA: Future Health Professionals, 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 dues.

Portfolios

Portfolio development is an instructional strategy used to showcase 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 Certification and Credentials

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 MOS (Microsoft Office Specialist), 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 "certifications" section under each career pathway for a complete listing. Many of these certifications/credentials offer the student an advanced position in a variety of higher paying jobs in our community.

High School Graduation Project

Students from Centennial School District who attend MBIT are encouraged to complete a graduation project and/or their high school's graduation project requirement as part of the program. This opportunity is made available through the collaborative and coordinated efforts of MBIT and Centennial School District. Juniors from Centennial School District are required to complete their projects at MBIT. The purpose of this culminating project is to assure that students are able to analyze, synthesize, evaluate, apply and communicate information and knowledge. MBIT provides creative, relevant, and meaningful opportunities to complete this graduation requirement.

Job/Career Placement Services

Based on the student's career goal, Middle Bucks provides job placement services to meet individual needs and interests. Placement rates for Middle Bucks graduates have been excellent and have historically exceeded 90% for those students who desire and actively pursue job or college placement. Middle Bucks is committed to the placement of all successful students. In addition, placement services are available to all Middle Bucks alumni.

Adult and Industry Education

Adult students are accepted into all daytime programs as space permits. Opportunities exist for adult students to upgrade skills in their current position, refresh skills for employment, or enter a new field. Students are offered individualized programs tailored to their needs. Flexible scheduling, childcare and placement assistance are available. In addition, customized industry employee training programs are available for companies and organizations. Finally, adults may enroll in one or more of the technical courses offered through the evening school program.

FACULTY & STAFF PROFILES

GINA BOCCELLA

Teaching Assignment: Health Occupations

B.S. in Nursing, Temple University; Five years of nursing experience working at Abington Memorial Hospital; Certified Med/Surg Registered Nurse, Certified Reiki practitioner; graduate of Middle Bucks Institute of Technology; possesses Pennsylvania teaching certificate

PAUL CARNEY

Teaching Assignment: Welding Technology

B.S. in Education, Temple University; occupational experience of thirty-five years; President, Pennsylvania Association of Welding Educators (PAWE); American Welding Society (AWS); Certified Welding Educator (CWE); Certified Welding Inspector (CWI/AWS/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; certified 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; serves as a Mentor Teacher; possesses Pennsylvania certificates in teaching and Cooperative Education.

PAUL CIARLONE

Teaching Assignment: Automotive Technology

Twenty-eight years of occupational experience, including fifteen years as owner/operator of an automotive repair business and sixteen years of experience as an instructor; Degree from Automotive Training Center in Specialized Automotive Service Technology with a Machine Shop Major; Degree 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 Condition Society 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.

LISA CUFFARI

Teaching Assignment: Dental Occupations

Graduate of Manor College; Licensed Expanded Function Dental Assistant; twenty years dental office experience; six years teaching experience; member of the American Dental Assistants Association; possesses Pennsylvania teaching certificate.

DENISE DOHONEY

Assignment: Assistant Administrative Director

M.Ed. in Education, Temple University; B.S. in Education, Bloomsburg University; Principal's Certification, Immaculata University; ten years educational administration experience; twenty-one years teaching experience; Adjunct Professor, Temple University; member of the Pennsylvania Association of Career and Technical Administrators (PACTA), Association of Career and Technical Education (ACTE), and Pennsylvania Association of Elementary and Secondary School Principals (PAESSP); possesses Pennsylvania Elementary and Secondary Principal Certification and Director of Career and Technical Education Certification.

FACULTY & STAFF PROFILES

MAURA DUNCAN

Teaching Assignment: Cosmetology

Possesses State Board of Cosmetology Teacher certification; seven years teaching experience and three years as an Instructional Assistant; member of Association of Vocational Teachers Educating in Cosmetology; active licensed stylist; graduate of Middle Bucks Institute of Technology; possesses Pennsylvania teaching certificate.

ANGELA EGGE

Assignment: Special Needs Coordinator

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; fifteen years teaching experience; three years administrative experience; member, Bucks County Autism Support Coalition; member, Council for Exceptional Children; President of Sigma Phi Epsilon Delta, graduate honor society, East Stroudsburg University; possesses Pennsylvania, Maryland, and Virginia teaching certificates.

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; adjunct faculty member at Bucks County Community College, 2003 Pennsylvania Career and Technical Education Teacher of the Year; certification as a Senior Instructor-Advanced with Protective Safety Systems; NFPA Fire Fighter, Pennsylvania Department of Health State Certified Emergency Medical Technician Instructor, MOAB (Management of Aggressive Behavior) Instructor; PATH (Practical and Tactical Handcuffing) Instructor; Expandable Baton Instructor; OCAT (Oleoresin Capsicum Aerosol Training) Instructor, developed and conducted safety training for various government/private agencies on the international, state, and local levels; serves as a Mentor Teacher; possesses Pennsylvania teaching certificates in Law Enforcement and Public Safety.

SANDRA FITZPATRICK

Assignment: Special Needs Coordinator

M.Ed. (cum laude) in Special Education, Arcadia University; B.A. (summa cum laude) in Psychology, Gwynedd Mercy University; eighteen years of experience in Career and Technical Education; member of Pennsylvania Association of Career and Technical Administrators (PACTA) and AutismSpeaks; possesses Pennsylvania K-12 Special Education certificate.

STACEY FLOOD

Assignment: Special Needs Coordinator

M.Ed. in Education, LaSalle University; B.S. Psychology, East Stroudsburg University; Certification in Special Education K-12; member of Pi Lambda Theta National Honors Society, LaSalle University, eight years experience in Career and Technical Education; possesses Pennsylvania teaching certificate.

FACULTY & STAFF PROFILES

MARK C. GAGE

Teaching Assignment: Culinary Arts

Graduate of the Culinary Institute of America, Hyde Park, New York; over twenty-five years occupational experience in the hospitality, food, and beverage industry, including positions as Executive Chef at country clubs, restaurants, hotels and catering establishments; Director of Food and Beverage for Club Corp of America International, Dallas, Texas; Instructor, Delaware Valley Culinary Institute; member of the American Culinary Federation (ACF); ACF Certified Executive Chef (CEC) and Certified Secondary Culinary Educator (CSCE); 2012 Recipient of the Liberty Museum *Teacher as Hero Award* member of Delaware Valley Chefs Association and Phi Theta Kappa, National Honor Society; culinary arts salon winner; state certified food sanitation manager; graduate of Lower Bucks Technical School; possesses Hospitality, Supervision, and Nutrition Certification through the American Culinary Federation and Commercial Baking & Pastry Certification through Temple University; possesses Pennsylvania teaching certificate.

DR. THOMAS GREGOR

Assignment: Work-Based Education Teacher/Coordinator

Ph.D., Vocational, Technical and Adult Education, minors in Industrial Management & College Administration, University of Missouri; M.S. in Technical Education & Industrial/Consumer Psychology, Purdue University; B.S. in Education and Engineering, Purdue University, nine years secondary school teaching; two years 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: Guidance Counselor

M.S. in Psychology from St. Joseph's University; B.S. (summa cum laude) in Psychology from St. Joseph's University; ten years of experience working in Career and Technical Education; member of Psi Chi, The International Honor Society in Psychology, the Pennsylvania School Counselors Association (PSCA), and the American School Counselor Association (ASCA); possesses Pennsylvania Secondary School Counselor certification.

STEVEN GUINAN

Teaching Assignments: Web Design and Interactive Media;

Administrative Sciences & Business Technology

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; Microsoft Office & Adobe Certified; Member of the National Business Association of Education; possesses Pennsylvania teaching certificate.

FACULTY & STAFF PROFILES

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 & painter's trainer; Chief Automotive Certificate for Full Frame Analysis & Repair Planning, Design Based Repair; Mitchell International Certificate in Advanced Computer-Assisted Estimating; Member of I-CAR's Collision Repair Instructor Network Association (CRIN); twenty-seven years teaching experience in Automotive Collision Repair; graduate of Middle Bucks Institute of Technology; possesses Pennsylvania teaching certificate and Cooperative Education Coordinator.

CRAIG MALINOWSKI

Teaching Assignment: Computerized Drafting & Engineering Graphics

B.S. in Architecture, Drexel University; A.S. in Architectural Drafting, Bucks County Community College; Twenty years occupational experience in architecture and drafting technology; Member, American Design & Drafting Association (ADDA) and National Council of Architectural Registration Boards (NCARB); Green Advantage Certified (Building Green Initiative); graduate of Middle Bucks Institute of Technology; possesses Pennsylvania teaching certificate.

MICHAEL McCOMBE

Teaching Assignment: Culinary Arts

Graduate of the Culinary Institute of America, Hyde Park, New York; over thirty-four years occupational experience in the hospitality industry working in both management & chef positions at various prestigious resort hotels, restaurants, country clubs, catering establishments, & food service companies; member, American Culinary Federation (ACF) Philadelphia Chapter; ACF Certified Executive Chef (CEC) and Certified Culinary Educator (CCE); possesses ACF certification in Sanitation, Supervisory Hospitality Management, and Nutrition; Academic Mentor for the Culinary Institute of America; member, Delaware Valley Chefs Association; graduate of Middle Bucks Institute of Technology; National Technical Honor Society & SkillsUSA advisor; Corps Leader of the Bucks County Summer Youth Program; Instructor, 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 Vocational Association; possesses Pennsylvania teaching certificate.

RANDALL McDOWELL

Teaching Assignment: Electrical & Network Cabling

Possesses PA Journeyman's Certification; twenty-seven 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; eight years teaching experience; member of Electrical Association of Philadelphia; Advisor to the student chapter of the National Home Builders Association; possesses Pennsylvania teaching certificate.

JO ANN McLAUGHLIN

Teaching Assignment: Cosmetology

Teaching experience of over 25 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; State Board Exam Rater; Paul Mitchell Trained; CliC Certified; Curriculum Development Manager and Regional Educational Director for private beauty school; member of the Association of Vocational Teachers Educating in Cosmetology; former Teacher of the Year; possesses Pennsylvania teaching certificate.

FACULTY & STAFF PROFILES

MARSHA MOYER

Teaching Assignment: Health Sciences

M.Ed. in Education, Temple University; B.S. in Nursing, Gwynedd-Mercy University; over twenty years of nursing and occupational experience; recognized as an Outstanding Vocational Teacher of the Year by the Pennsylvania College of Technology; recognized as Pennsylvania's Outstanding Vocational Teacher of the Year by the Pennsylvania Vocational Association; Advisor for HOSA: Future Health Professionals, a Career and Technical student organization; Penn HOSA Board Member; Past President of Omicron Tau Theta, graduate honor society, Temple University, Gamma Chapter; served as a Mentor Teacher; possesses Pennsylvania teaching certificate.

JEFFREY MUSCHLITZ

Teaching Assignment: HVAC/Plumbing Technology

A.S. in HVAC/Plumbing Technology, Penn College of Technology; five years as Adjunct Professor in HVAC Technology at Northampton Community College; fourteen 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 Penn College of Technology; R-410a Certification; Trac and Gas Tite Flex Gas Pipe Certification; Carrier Heat Pump Certification; Management of Aggressive Behavior (MOAB) Certification; OSHA 10 hour CareerSafe Certification; NCCER HVAC, Plumbing, and Core Instructor Certification; Keystone Technology Integrator; Pneumatic Controls, Chiller and Steam Systems experience; twenty-three years of occupational experience in the HVAC/Plumbing industry; eleven years teaching experience in the HVAC and Plumbing 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; eighteen years teaching experience in computer & electronics, twenty-three years occupational experience in the computer industry; President and owner Moonlight Computer Consulting; holds F.C.C. radio license; served in the U.S. Navy; possesses Pennsylvania teaching certificate.

STACY PAKULA

Assignment: Career & Technical Education Supervisor

M.A. in Psychology, LaSalle University; B.S. in Psychology, James Madison University; eleven years as certified test supervisor through ACT; certified Student Assistance Program (SAP) facilitator; member of Psi Chi, 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 at Temple University; possesses Pennsylvania Supervisor of Career and Technical Education Certification.

FACULTY & STAFF PROFILES

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, Li'l Bucks Partners in Learning Child Care Center; Member of NAEYC (National Association for the Education of Young Children) and PACCA (Pennsylvania Child Care Association); twenty 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; possesses the PA Child Care Director's Credential and Pennsylvania teaching and vocational certificates, PQAS Trainer, CDA Professional Evaluator.

ERIN-CAITLIN RINKER

Assignment: Organizational Advancement Coordinator

M.Ed. in Counselor Education, Indiana University of Pennsylvania; B.A. in Psychology with a minor in Educational Psychology; Indiana University of Pennsylvania; experience working as a Guidance Counselor with children and teens from kindergarten through 12th grade; 1.5 years of experience working in the mental health field as part of the Student Assistance Program; 5 years of volunteer experience as a support group leader for a grief program known as Safe Harbor, Abington Memorial Hospital; member of the Chi Sigma Iota Counseling Academic and Professional Honor Society International, Pennsylvania School Counselors Association (PSCA), American School Counselors Association (ASCA), and the National School Public Relations Association (NSPRA); possesses Pennsylvania Secondary School Counseling certification.

ALLAN ROBERTS

Teaching Assignment: Engineering Related Technology

M.S. in Industrial Engineering and Management, Redding University; B.S. in Industrial Engineering, New York Institute of Technology; over thirty years of engineering, operations, and management experience; international experience in a variety of situations and projects with Processed Metals USA, American Meter Company, Abex Corporation, and Grumman Aerospace; positions held included Vice President of International Operations, Director of Manufacturing, Plant Manager, and I.E. Manager; holds U.S. patents; has developed and instructed a multimedia motivational program throughout the United States; member of Temple University Honor Society; senior member of the Society of Manufacturing Engineers, Institute of Industrial Engineers, and Robotics International; possesses Pennsylvania teaching certificate.

ANTHONY ROGERS

Teaching Assignment: Construction Carpentry

Twelve years of occupational experience including owner/operator of a residential construction and carpentry business; five years of teaching experience. Completed course work at Temple University, Moravian College, Delaware Valley College and Bucks County Community College; possesses Pennsylvania teaching certificate.

FACULTY & STAFF PROFILES

BRADLEY ROSENAU

Teaching Assignment: Commercial Art & 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 Associates Educator in Certiport Visual Communications using Photoshop, Illustrator, and InDesign ; awarded the Pennsylvania State University College of Education Alumni Outstanding Professional Teacher Award in 2010; extensive studio and freelance work, including experiences with illustration and graphic design for University Graphics Services & USA Today newspapers; served as newsletter chairperson for Omicron Tau Theta, graduate honor society, Temple University; served as newsletter editor for the Pennsylvania State University Alumni Association, Montgomery County chapter; possesses Pennsylvania teaching certificate.

ROBERT SCHWARZ

Teaching Assignment: Automotive Technology

B.S. in Automotive Technology Management, Pennsylvania College of Technology; previous teaching experience as an automotive instructor at Community College of Philadelphia; over ten years occupational experience 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 license, Pennsylvania Emissions 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.

GREGORY SMITH

Teaching Assignment: Practical Environmental Landscaping

B.S. in Business with a concentration in Marketing, Mount St. Mary's College; fifteen years industry experience, including twelve years as General Manager of a company specializing in residential and commercial landscaping and hardscaping; certified interlocking concrete paver installer; member of Pennsylvania State University Agricultural Education Advisory Council; Instructor, Hardscaping, Pennsylvania State University Agricultural Extension Education; Advisor of Middle Bucks Chapter Pennsylvania State FFA; Chair of Pennsylvania State FFA Nursery Landscape Career Development Event; possesses Pennsylvania teaching certificate.

KATHRYN STROUSE

Assignment: Administrative Director

M.Ed. in Educational Administration, Gwynedd-Mercy University; B.S. in Education, West Chester University; sixteen 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), Pennsylvania Association of School Personnel Administrators, and Pennsylvania Association of School Administrators; possesses Pennsylvania Elementary and Secondary Principal Certification and Director of Career and Technical Education Certification.

FACULTY & STAFF PROFILES

PAMELA SWOYER

Assignment: Work-Based Education Teacher/Coordinator

M.Ed. in Curriculum, Instruction, & 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, Bucks and Montgomery County Cooperative Education Association; member, Pennsylvania Cooperative Education Association, American and Pennsylvania Career & Technical Associations, Pennsylvania Business Education Association, National Association for Curriculum Development, Omicron Tau Theta Honor Society, and the Career and Technical Student Organization SkillsUSA District 2 Board; possesses Pennsylvania teaching certificates in Cooperative Education, Marketing Education, Business Education, and Special Education K-12.

MICHAEL SYKES

Teaching Assignment: Building Trades Occupations

Graduate of the Williamson Free School of Mechanical Trades; Business Administration coursework at Delaware Valley College; over twenty-nine years of occupational & supervisory experience in construction with an emphasis on home building, home remodeling, land acquisition, site improvement, entitlements, and customer service; Green Advantage Certified (Building Green Initiative), National Center for Construction Education and Research (NCCER) Core Curricula Instructor; HIPAA Certificate of Completion; Safety Committee Fundamentals Certificate in Hazard Identification, Safety Alerts and Beyond; 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.

CHRISTOPHER TULLY

Teaching Assignment: Multimedia Technology

M.Ed. in Education, Temple University; B.S. in Radio Television and Film, Temple University; Apple Distinguished Educator (ADE); ADE National Board Member; ADE International Board Member; Lead Teacher Association in Career and Technical Education; twenty-five years broad-based occupational experience producing, directing, and editing live television, radio and television commercials, promotional and corporate videos, as well as developing computer-based training programs, designing and managing websites as well as social media; assessment developer for Cisco Systems Incorporated, Apple Computers Incorporated, National Occupational Competency Testing Institute, and the Pennsylvania Department of Education; Apple Certified Trainer; Apple Pro User; Cisco Certified Instructor; member of the Association of Career and Technical Education (ACTE), International Society for Technology in Education, Omicron Tau Theta Honor Society, Apple Certified Alliance, Apple Final Cut Pro Users Group, and the National Association of Photoshop Professionals; recipient of ACTE Exemplary Program, PA, 2007; Outstanding CTE Program, PA, 2008; Apple Exemplary Program, 2009-2010 and 2010-2011; Apple Distinguished Program 2011-2012, 2012-2013, and 2013-2015; Central Bucks Chamber of Commerce Tree of Life Award, 2010; ACTE T&I Outstanding Teacher of the Year Award, 2010; and C. Thomas Olivo Outstanding Service Award, 2011; possesses Pennsylvania teaching certificate