Course Offerings Catalog
2020-2021
Career and College Pathways for High School Students
“...to enrich life and maximize potential within the community and workforce...”

— Mission Statement
Eastern Suffolk BOCES
Division of Educational Services
**Find Your Future Here**

All students upon graduation from High School will have the academic ability to persist and succeed in post-secondary education including corporate training, the military, apprenticeships, certificate programs and degree-bearing programs. Students will have the opportunity to possess:

- earning power in the form of an industry approved entry level certificate
- career ready practices embodied in employability profile
- a defined career pathway
- earned advanced standing and/or dual credit in a post-secondary institution

**NON-DISCRIMINATION STATEMENT**

Eastern Long Island Academy of Applied Technology, a program of Eastern Suffolk BOCES, does not discriminate against any employee, student, applicant for employment, or candidate for enrollment on the basis of sex, gender, general identity or expression, transgender status, race, color, religion or creed, age, weight, national origin, marital status, disability, sexual orientation, military or veteran status, domestic violence victim status, genetic predisposition or carrier status, or any other classification protected by Federal, State, or local law. This policy of nondiscrimination includes: access by students to educational programs, student activities, recruitment, appointment and promotion of employees, salaries, pay, and other benefits. ESBOCES also provides equal access to the Boy Scouts and other designated youth groups. ESBOCES fully complies with all applicable rules and regulations pertaining to civil rights for students and employees (e.g., Title IX of the Education Amendments of 1972, §504 of the Rehabilitation Act of 1973, Titles VI and VII of the Civil Rights Act of 1964, Dignity for All Students Act, §303 of Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990, and the Boy Scouts of America Equal Access Act of 2001). Inquiries regarding the implementation of the above laws should be directed to either of the ESBOCES Civil Rights Compliance Officers at ComplianceOfficers@esboces.org: the Assistant Superintendent for Human Resources, 631 687-3029, or the Associate Superintendent for Educational Services, 631 687-3056, 201 Sunrise Highway, Patchogue, NY 11772. Inquiries may also be addressed to the Office for Civil Rights at the US Department of Education, 32 Old Slip, 26th Floor, New York, NY 10005, 646-428-3800, OCR.NewYork@ed.gov.
Eastern Long Island Academy of Applied Technology
2020-2021 Course Offerings

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When a student completes a program of study in any of the Eastern Long Island Academy of Applied Technology programs, recommendations are made to the home school district to grant an endorsement on the student’s high school diploma. The district then awards endorsements based on that recommendation. Through rigorous coursework, articulations, and real-world experiences, students completing a program at the Eastern Long Island Academy of Applied Technology have the advantage of graduating from high school prepared for both college and the workplace. CTE students:

- Possess knowledge and can apply purposeful and specific technical skills, problem-solving, critical thinking, and are proficient in the use of innovative tools, resources and systems.
- Demonstrate achievement of specific technical skills as reflected in his/her Employability Profile Report.
- Have earned college credits, giving them an extra advantage when entering higher education.
- Experienced internships, pre-apprenticeships, and work-based learning opportunities.
- Engaged in local and national clubs, industry-specific organizations.
- Developed interpersonal and leadership skills that enhance academic, personal, and career development.
- Earned industry-recognized certifications and stackable credentials preparing them for entry-level positions in the workforce.
- Have knowledge of, and competency in, interacting with people of diverse backgrounds.
- Have competency in the use of technology that is aligned with industry standards.
GENERAL STATEMENT ON ADMISSIONS

Academy courses are offered as part of Career and Technical Education for secondary level students. These courses can lead to entry level employment or post-secondary education.

All students have the right of accessibility to programs of instruction available at The Academy and Special Career Education Centers within the Supervisory District. Eleventh and twelfth grade students may be eligible for admission to The Academy pending the outcome of the admissions screening process.

ACADEMY STUDENT REGISTRATION PROCEDURES

The registration process begins with the completion and submission of an Intake Application Form.

1. The Intake Application Form must be completed and signed by the Student, Parent/Guardian, School Nurse, Guidance Counselor and District Superintendent. All Intake Application Forms should be completed neatly in ink. The current grade level of the student should be used on the application.

2. The Intake Application Form must be accompanied by the student’s high school transcript, attendance summary (as of the date of the application) and a summary of discipline. If a student is classified by his/her district CSE, the completed Intake Application Form, along with the student’s high school transcript must also be accompanied by the student’s IEP, psychological report and vocational assessment.

Applications should be sent with accompanying information to:

Eastern Long Island Academy of Applied Technology
Admissions Department
Instructional Support Center @ Sequoya
750 Waverly Avenue
Holtsville, New York 11742

APPLICATIONS WILL NOT BE PROCESSED UNTIL ALL REQUIRED INFORMATION IS SUBMITTED BY THE STUDENT’S HIGH SCHOOL.

3. All applications will go through an Admissions Review process to determine appropriate student placement for each application received. The home school district will receive an enrollment confirmation or a second placement option from The Academy. The Academy Admissions Review Committee will be comprised of both Academy Administrators and Guidance Staff.

4. Students attending parochial or private schools need to have their home school district approval on the Intake Application Form as stated in #1 above. Home schooled students should contact their home school district for further information. Students receiving bilingual education services in their home school district will be evaluated by the Admissions Review Committee on a case by case basis.

5. Adult residents of the supervisory district who have graduated high school or are 18 years or older may enroll in a secondary program. An Intake Application Form including a recent High School Transcript must be submitted. Applications must be returned to The Academy Admissions office. Adult Students without a recent transcript may be required to take a reading and math assessment to determine appropriate placement in the program prior to admission into any Academy course.

6. If a parent or District would like to appeal the determination made by the Academy Admissions Review Committee, the parent and/or District may request a meeting with the program’s Principal to review the Committee’s findings.

For further information, please contact one of The Academy Guidance offices:

Gary D. Bixhorn Technical Center (631) 286-6516
Edward J. Milliken Technical Center (631) 244-5815
Harry B. Ward Technical Center (631) 208-2038
COURSE CREDIT

It is recommended that four (4) units of graduation credit be awarded for each student who successfully completes a course (or clusters of a course) of study in The Academy that spans one school year. In addition, integrated into all first year programs will be the Career and Financial Management (CFM) curriculum. Therefore, it is recommended that all first year students who successfully complete their course work receive one (1) additional credit for CFM. A student who successfully completes two full-year programs can be awarded up to nine (9) graduation credits: five (5) for the first year and four (4) for the second year. Students may be awarded two (2) units of graduation credit for successful completion of a course (or clusters of a course) organized on a single semester basis. In addition, students may be awarded a half (1/2) unit of graduation credit for the successful completion of CFM for a single semester.

ACADEMIC CREDIT FOR THE ACADEMY PROGRAM

Many of our programs have been approved for academic credit in English, Mathematics, Science, Social Studies, Art and Health by the State Education Department as part of the CTE approval process. A student can only receive credit upon approval by their District Superintendent or designee, upon successful completion of the The Academy program and applicable competency/Regents examinations.

To fulfill these requirements, each academic course has been developed to insure that student activities are based on reinforcing the New York State learning standards.

TECHNICAL ENDORSEMENT

• Completion of all high school course graduation requirements
• Successful completion of Career and Financial Management
• Completion of all required Regents and/or RCT examinations
• Completion of The Academy program
• Pass the State-approved Technical Assessment for the program

STUDENT ADVANTAGES FOR COMPLETING A PROGRAM AT THE ACADEMY

• Opportunity to study and succeed in a challenging program, which meets both academic and current business/industry standards.
• Opportunity to study within contextualized settings that relate to areas of personal interest.
• Earning a Career and Technical endorsement increases the value of the high school diploma.
• Documentation of successful work-based experiences through the work-skills employability profile.
• Opportunity to earn certifications pertaining to The Academy program.
## Eastern Long Island Academy of Applied Technology

### Academic Credit Status Chart 2020-21

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>CTE</th>
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<th>CTE</th>
<th>SED General Education Credit</th>
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<tr>
<td><strong>Program Status</strong></td>
<td><strong>ELA</strong></td>
<td><strong>MATH</strong></td>
<td><strong>SCIENCE</strong></td>
<td><strong>Miscellaneous</strong> (All courses include one additional credit for CFM—Career and Financial Management)</td>
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<td>Clinical Medical Assisting - 1 year (1 year = MAXIMUM 1.5 academic credits)</td>
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<td>Computer Science and App Development (Pending)</td>
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<td>Computer Technology and Repair - 2 years (2 years = MAXIMUM 1 academic credit)</td>
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<td>Cosmetology - 2 years (2 years = MAXIMUM 2 academic credits)</td>
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<td>Culinary Arts/Restaurant Operations Management - 1 year (1 year = no academic credit)</td>
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<td>Dental Chairside Assisting - 1 year (1 year = MAXIMUM 1.5 academic credits)</td>
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<td>Drone Technology (Pending)</td>
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<td>Early Childhood Education - 1 year (1 year = 1 academic credit)</td>
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<td>Electrical Trade and Alternative Energy - 1 year (1 year = no academic credit)</td>
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<td>Engineering - 1 year (1 year = 1 academic credit)</td>
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<td>Engineering - 2 years (2 years = MAXIMUM 2 academic credits)</td>
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<td>Electrical Trade and Alternative Energy - 2 years (2 years = MAXIMUM 3 academic credits)</td>
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<tr>
<td>Fashion Merchandising and Design - 1 year (1 year = 2 academic credits)</td>
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<tr>
<td>Fashion Merchandising and Design - 2 years (2 years = MAXIMUM 2 academic credits)</td>
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<td>and Art (1 credit)</td>
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<td>Heating, Ventilation and Air Conditioning - 1 year (1 year = 1 academic credit)</td>
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<td>Law Enforcement - 1 year</td>
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<td>Physical Therapy Aide - 1 year (Pending)</td>
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<td>Practical Nursing - 1 year</td>
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<td>Professional Photography and Digital Imaging - 1 year</td>
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<td>Television, Video and Digital Film Production - 1 year</td>
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<td>Welding/Metal Fabrication - 2 years</td>
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REPORTS TO DISTRICTS

District Rosters
Rosters are issued several times during the school year to District Contact Personnel to permit component districts and The Academy to reconcile enrollment rosters. Prior to the closing of school in June, the District Roster for the ensuing school year is sent to District Contact Personnel from The Academy’s Admissions Office.

Daily/Weekly Attendance Reports
Designated personnel at each district receive weekly copies of our attendance reports. The report contains: daily absences, building assignment, current status (add, withdrawn) and cumulative absence record.

Quarterly Grade Report
These are prepared for each student and made available via the Parent Portal. A comprehensive report listing student grade information is sent to each District.

Cumulative Transcript
Upon District request, a cumulative transcript (unofficial) will be issued for each student at the conclusion of the school year.

Employability Profile
This is prepared and issued along with the Certificate of Completion to each student who successfully completes program requirements.

DISTRICT CONTACT MEETINGS

All District Contact Personnel for secondary programs are invited to meet three times a year with Academy staff to learn about new program offerings, changes in policies and to discuss common concerns. In addition, each fall, a New Counselors’ Workshop is offered to familiarize first-time counselors with the The Academy’s policies and procedures.

SCHOOL ORGANIZATIONS

SkillsUSA
SkillsUSA is a national student organization designed to provide opportunities to develop excellence in skills and leadership. SkillsUSA offers co-curricular activities to enhance the training and education experiences of students at regional, state, national and international competitions.

National Technical Honor Society (NTHS)
Each Technical Center sponsors a chapter of the NTHS. Students who exhibit outstanding academic excellence (90% or above), outstanding attendance (no more than 6 days absent) and good citizenship within the chosen Academy program qualify for possible nomination.
ADVANCED COLLEGE STANDING AGREEMENTS
EASTERN LONG ISLAND ACADEMY OF APPLIED TECHNOLOGY

The following colleges offer college credit or waivers for students successfully completing any of the following Academy programs and who meet the criteria required by each college. Please contact Academy guidance counselors for the most recent listing of Advanced Standing Agreements.

**ANIMAL SCIENCE**
- Harcum College
- Morrisville State College*
- SUNY Cobleskill
- SUNY Delhi

**ART, DESIGN AND VISUAL COMMUNICATIONS**
- Fashion Institute of Design and Merchandising (FIDM)
- Mohawk Valley Community College
- Sullivan County Community College
- SUNY Canton
- SUNY Cobleskill
- SUNY Empire State College

**AUDIO PRODUCTION**
- Five Towns College
- Recording Engineers Institute

**AUTO BODY REPAIR AND CAR CUSTOMIZING**
- Alfred State College
- Lincoln Technical Institute
- Morrisville State College
- New England Institute of Technology
- New York Automotive and Diesel Institute

**AUTOMOTIVE TECHNOLOGY**
- Alfred State College
- Farmingdale State College*
- Lincoln Technical Institute
- Morrisville State College
- New England Institute of Technology
- New York Automobile and Diesel Institute
- Ohio Technical College
- SUNY Canton
- SUNY Delhi
- SUNY Empire State College
- SUNY Suffolk*
- University of Northwestern Ohio

**AVIATION/PROFESSIONAL PILOT TRAINING**
- Embry-Riddle Aeronautical University
- Farmingdale State College*

**BARBERING**
- Five Towns College

* Dual Enrollment
CARPENTRY/RESIDENTIAL CONSTRUCTION AND HOME IMPROVEMENT  
• Alfred State College  
• New England Institute of Technology  
• Northeast Regional Council of Carpenters Apprenticeship Program  
• SUNY Delhi  

CERTIFIED PERSONAL TRAINER  
• Monroe College  
• SUNY Canton  
• SUNY Suffolk*  

CLINICAL MEDICAL ASSISTING  
• Monroe College  
• New England Institute of Technology  

COMPUTER TECHNOLOGY AND REPAIR  
• Island Drafting and Technical Institute  
• Monroe College  
• New England Institute of Technology  
• SUNY Canton  

COSMETOLOGY  
• Five Towns College  
• New England Institute of Technology  

CULINARY ARTS/RESTAURANT OPERATIONS MANAGEMENT  
• Alfred State College  
• The Culinary Institute of America  
• Johnson and Wales University  
• Monroe College  
• New England Culinary Institute  
• Stratford University  
• Sullivan County Community College  
• SUNY Cobleskill  
• SUNY Delhi  
• SUNY Empire State College  
• SUNY Suffolk*  

DENTAL CHAIRSIDE ASSISTING  
• Plaza College  
• SUNY Stony Brook  

EARLY CHILDHOOD EDUCATION  
• Herkimer County Community College  
• Monroe College  
• SUNY Canton  
• SUNY Cobleskill  
• SUNY Empire State College  

ELECTRICAL TRADE AND ALTERNATIVE ENERGY  
• Electrical Training Center, Inc.  
• Lincoln Technical Institute  
• New England Institute of Technology  
• SUNY Delhi  

ENGINEERING  
• Farmingdale State College  
• Rochester Institute of Technology  
• SUNY Canton  
• Vaughn College of Aeronautics and Technology  

* Dual Enrollment
FASHION MERCHANDISING AND DESIGN
- Buffalo State University*
- Fashion Institute of Design and Merchandising (FIDM)
- Five Towns College
- Laboratory Institute Merchandising (LIM)

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)
- Electrical Training Center, Inc.
- Lincoln Technical Institute
- New England Institute of Technology
- SUNY Canton
- SUNY Delhi
- SUNY Empire State College
- SUNY Suffolk*
- University of Northwestern Ohio

LAW ENFORCEMENT
- Herkimer County Community College
- Monroe College
- New England Institute of Technology
- Schenectady County Community College
- SUNY Canton

MARINE/MOTORSPORTS TECHNOLOGY
- Alfred State College
- Kingsborough Community College
- New England Institute of Technology
- SUNY Canton
- SUNY Empire State College
- Universal Technical Institute

NURSE ASSISTING
- Monroe College

PLUMBING AND HEATING
- Alfred State College
- Lincoln Technical Institute
- New England Institute of Technology
- SUNY Delhi

PRACTICAL NURSING
- Adelphi University
- Helene Fuld College of Nursing

PROFESSIONAL PHOTOGRAPHY AND DIGITAL IMAGING
- Mohawk Valley Community College

TELEVISION, VIDEO AND DIGITAL FILM PRODUCTION
- Five Towns College
- New England Institute of Technology
- SUNY Cobleskill
- SUNY Suffolk*

WELDING/METAL FABRICATION
- Alfred State College
- Lincoln Technical Institute
- Mohawk Valley Community College
- SUNY Delhi

ALL APPLICABLE PROGRAMS
- Pennsylvania College of Technology

* Dual Enrollment
Dual Enrollment and Early College Programs
Eastern Long Island Academy of Applied Technology

A Guide for Students and Parents

BUFFALO STATE
The State University of New York

EASTERN LONG ISLAND ACADEMY OF APPLIED TECHNOLOGY
Find Your Future Here

Farmingdale State College
State University of New York

MORRISVILLE STATE COLLEGE
State University of New York
About the Dual Enrollment Program

The Eastern Long Island Academy of Applied Technology offers high school students the opportunity to earn college credit while attending select CTE programs. Through the Dual Enrollment Program, courses are taught at the Academy Technical Center by our college-approved teachers. These classes have the same curriculum and requirements as those offered on the college campus. Students who successfully complete the class earn credits that count toward high school graduation as well as college credit for the course. These college credits can be applied at the college or transferred to another college or university.*

Advantages of Dual Enrollment

• Students who participate in a Dual Enrollment Program are more likely to graduate from high school, enroll in college, earn higher grade-point averages and complete college degrees.
• Dual Enrollment courses bear the same quality and quantity of credits as courses offered on campus but at 1/3 the cost of tuition.
• Dual Enrollment students receive grades and feedback throughout the course, thus eliminating high-stakes, end-of-the-year testing.
• Dual Enrollment courses taken in high school may fulfill college degree requirements, serve as electives, or fulfill prerequisite requirements. This may allow students to graduate earlier or earn credits toward additional concentrations, minors or majors.
• Dual Enrollment courses show colleges that you are a motivated student who has pursued challenging opportunities.
• Dual Enrollment courses help students explore careers. Students who are undecided in their career interests can benefit by the additional research and rigor provided in a Dual Enrollment course.

Which Academy courses are offered for Dual Enrollment?

As of the Fall of 2019, we have Dual Enrollment offerings for the following courses:

<table>
<thead>
<tr>
<th>Academy Course</th>
<th>College</th>
<th># of Credits Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Science</td>
<td>Morrisville State College</td>
<td>3 credits</td>
</tr>
<tr>
<td>Auto Tech</td>
<td>Farmingdale State College</td>
<td>3 credits</td>
</tr>
<tr>
<td></td>
<td>Suffolk County Community College</td>
<td>3 credits</td>
</tr>
<tr>
<td>Aviation/Professional Pilot Training</td>
<td>Farmingdale State College</td>
<td>up to 6 credits</td>
</tr>
<tr>
<td>Certified Personal Trainer</td>
<td>Suffolk County Community College</td>
<td>3 credits</td>
</tr>
</tbody>
</table>

Additional courses may be added throughout the school year. Please check with your Academy School Counselor or teacher for any additional updates.

What is the cost of taking a course through Dual Enrollment?

<table>
<thead>
<tr>
<th>College</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suffolk County Community College</td>
<td>$171 for 3 credits</td>
</tr>
<tr>
<td>Buffalo State University</td>
<td>$250 per course</td>
</tr>
<tr>
<td>Farmingdale State College</td>
<td>$150 for 3 credits</td>
</tr>
<tr>
<td>Morrisville State College</td>
<td>$150 for 3 credits</td>
</tr>
</tbody>
</table>

When can I register?

Please see your Academy School Counselor for registration deadlines.

Grades and Course Information

The college final grade will be calculated according to the standard set by the college, and the high school grade will be calculated according to the high school standard. The grading standard for each course is outlined on a Course Information Sheet (your Academy teacher can provide one to you). Some Dual Enrollment courses require an additional project or exam and/or may not accept extra credit and late work. In cases such as these, your final Academy grade might be different than your final college grade.

At the end of the course, you will receive a grade report from the college at which you are enrolled. This is the grade that will be part of your official college transcript.

*TRANSFER STATEMENT: While most colleges accept college credits when a grade of C or higher is earned, we cannot guarantee that all credits will be accepted because each college sets its own transfer policy. If you are planning to attend a college other than the college affiliated with our CTE program, we recommend you check the transfer policy of that college before enrolling in our courses.

Questions? Please see your Academy School Counselor for additional details.
CAREER AND TECHNICAL EDUCATION ADMINISTRATIVE PERSONNEL
2020-21

David Wicks, District Superintendent
Julie Davis Lutz, Ph.D., Chief Operating Officer
Peggie Staib, Ed.D., Associate Superintendent for Educational Services
Leah Arnold, Director for Career, Technical and Adult Education
Barbara Egloff, Divisional Administrator for Career, Technical and Adult Education
Robert Van Brunt, Program Administrator for Career, Technical and Adult Education
Emily Puccio, Program Administrator for Career, Technical and Adult Education
Dolly Kranz, Program Administrator for Health Sciences

GARY D. BIXHORN TECHNICAL CENTER / 350 Martha Avenue, Bellport, NY 11713
Samuel McAleese, Principal
Nicole Ferraro, Assistant Principal

EDWARD J. MILLIKEN TECHNICAL CENTER / 375 Locust Avenue, Oakdale, NY 11769
Thomas McGrath, Principal
Jennifer Martino, Assistant Principal

HARRY B. WARD TECHNICAL CENTER / 970 North Griffing Avenue, Riverhead, NY 11901
Marie Davis, Principal
Chris D’Ambrosio, Assistant Principal
EASTERN LONG ISLAND ACADEMY OF APPLIED TECHNOLOGY PROGRAM DESCRIPTION
Academy programs are conducted at the Gary D. Bixhorn Technical Center, Edward J. Milliken Technical Center and Harry B. Ward Technical Center. Many course offerings can be taken as one and/or two-year programs.

CALENDAR
The District Superintendent’s recommended school calendar will be followed. The secondary class schedules for the three centers are as follows:

• Gary D. Bixhorn Technical Center and Edward J. Milliken Technical Center
  The morning session will begin at 7:45 a.m. and end at 10:15 a.m. (2 hours 30 minutes of instruction)
  The afternoon session will begin at 12:00 noon and end at 2:30 p.m. (2 hours 30 minutes of instruction)

• Harry B. Ward Technical Center
  The morning session will begin at 7:55 a.m. and end at 10:25 a.m.
  (2 hours 30 minutes of instruction)
  The afternoon session will begin at 11:55 a.m. and end at 2:25 p.m.
  (2 hours 30 minutes of instruction)

POLICY ON ATTENDANCE
The student is required to maintain a satisfactory attendance record while receiving approximately 180 days of specialized instruction in an Academy program.

Attendance Guidelines
1. Students will be advised of the attendance policies as stated in the student handbook.
2. Parent/guardian will be contacted regarding excessive absences.
3. Component school districts will be provided with a weekly attendance report by Admissions.
CERTIFICATE OF RECOGNITION
In order to receive a Certificate of Recognition, students are required to attend a minimum of 90% of scheduled instructional days identified in the current Academy school calendar and receive a final grade of 65% or above (70% or above for health related programs).

The table below indicates the criteria for students to qualify for Certificates of Mastery and High Honors:

<table>
<thead>
<tr>
<th>Final Average Grade</th>
<th>Attendance Rate</th>
<th>Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>85-89</td>
<td>90%</td>
<td>Mastery</td>
</tr>
<tr>
<td>95+</td>
<td>96%</td>
<td>High Honors</td>
</tr>
</tbody>
</table>

ACADEMY GRADE REPORTING
The Technical Centers use a numerical grading system. Students should achieve a minimum passing grade of 65% to be recommended for credit and for a Certificate of Completion.

Students may earn certificates as indicated below:

<table>
<thead>
<tr>
<th>Numeric Grade</th>
<th>Quality Point</th>
<th>Alpha Equivalent</th>
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</thead>
<tbody>
<tr>
<td>100-97</td>
<td>4.00</td>
<td>A+</td>
</tr>
<tr>
<td>96-93</td>
<td>4.00</td>
<td>A</td>
</tr>
<tr>
<td>92-90</td>
<td>3.75</td>
<td>A-</td>
</tr>
<tr>
<td>89-87</td>
<td>3.50</td>
<td>B+</td>
</tr>
<tr>
<td>86-83</td>
<td>3.00</td>
<td>B</td>
</tr>
<tr>
<td>82-80</td>
<td>2.75</td>
<td>B-</td>
</tr>
<tr>
<td>79-77</td>
<td>2.50</td>
<td>C+</td>
</tr>
<tr>
<td>76-73</td>
<td>2.00</td>
<td>C</td>
</tr>
<tr>
<td>72-70</td>
<td>1.75</td>
<td>C-</td>
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<tr>
<td>69-67</td>
<td>1.50</td>
<td>D+</td>
</tr>
<tr>
<td>66-65</td>
<td>1.00</td>
<td>D</td>
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<tr>
<td>Below 65</td>
<td>0.00</td>
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</table>

Other Grades

LE (Late Entry):
Any student that has entered a program after the first week in October and does not have sufficient grades for the first marking period may be given an LE. Please note the student’s final average will be hand-tended by the district, averaging the second, third and fourth quarter grades.

I (Incomplete):
Students that have been attending and have not completed the quarter’s required work may be given an Incomplete. This student will have an additional 10 school days to complete the work. At that time the teacher will be asked to submit a quarter grade. An Incomplete will not be given for the fourth quarter.

NG (No Grade):
Students that have been absent for a documented reason, i.e. hospitalization, severe illness or injury, pregnancy, etc. may be given an NG. The student’s final average must be hand-tended by the district.

Anecdotal remarks indicate to the home school district and the parents the need for supportive assistance to increase the level of student achievement and/or acceptable behavioral performance. Commendations for noteworthy accomplishments are also indicated.
MIDDLE STATES ACCREDITATION OF COLLEGES AND SCHOOLS
The Academy has received accreditation from the Middle States Association of Colleges and Schools (MSA). MSA was established in 1887 and is a non-governmental, non-profit, peer administered organization that provides leadership in school improvement for its member schools.

Each Technical Center underwent a comprehensive Accreditation for Growth Self-Study and has developed appropriate program mission statements as well as academic and behavioral student performance objectives. Action plans were developed and implemented by each site to help in meeting the objectives identified and to assist in overall school improvement plans. Middle States Validation Teams completed evaluations of The Academy's programs.

For additional information about our Accreditation for Growth process, please contact the building principal at their respective sites.

Gary D. Bixhorn Technical Center
Samuel McAleese (631) 286-6500

Edward J. Milliken Technical Center
Thomas McGrath (631) 244-5800

Harry B. Ward Technical Center
Marie Davis (631) 369-8100
### PROGRAM BTC MTC WTC

<table>
<thead>
<tr>
<th>PROGRAM</th>
<th>BTC</th>
<th>MTC</th>
<th>WTC</th>
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<tbody>
<tr>
<td>Animal Science</td>
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<tr>
<td>Art, Design and Visual Communications</td>
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<td>Audio Production</td>
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<td>Auto Body Repair and Car Customizing</td>
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<td>Automotive Technology</td>
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<td>Aviation/Professional Pilot Training</td>
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<td>Barbering</td>
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<td>Carpentry/Residential Construction and Home Improvement</td>
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<td>Certified Personal Trainer</td>
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<td>Clinical Medical Assisting</td>
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<td>Computer Science and App Development</td>
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<td>Computer Technology and Repair</td>
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<td>Cosmetology</td>
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<td>Culinary Arts/Restaurant Operations Management</td>
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<td>Dental Chairside Assisting</td>
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<td>Drone Technology</td>
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<td>Early Childhood Education</td>
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<tr>
<td>Engineering</td>
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<tr>
<td>Engineering Collaborative–Regional STEM High School</td>
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<td>Fashion Merchandising and Design</td>
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<td>Marine/Motorsports Technology</td>
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<td>Physical Therapy Aide</td>
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<td>Plumbing and Heating</td>
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<tr>
<td>Practical Nursing</td>
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<tr>
<td>Professional Photography and Digital Imaging</td>
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<tr>
<td>Television, Video and Digital Film Production</td>
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<tr>
<td>Welding/Metal Fabrication</td>
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</table>

### CONTACT INFORMATION

<table>
<thead>
<tr>
<th>Location</th>
<th>Counselor</th>
<th>Telephone</th>
<th>e-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary D. Bixhorn Technical Center (BTC/Bellport)</td>
<td>Albana Esposito</td>
<td>(631) 286-6516</td>
<td><a href="mailto:aesposit@esboces.org">aesposit@esboces.org</a></td>
</tr>
<tr>
<td>Edward J. Milliken Technical Center (MTC/Oakdale)</td>
<td>Mai Lan Boyce-Hurst</td>
<td>(631) 244-5815</td>
<td><a href="mailto:mhurst@esboces.org">mhurst@esboces.org</a></td>
</tr>
<tr>
<td>Harry B. Ward Technical Center (WTC/Riverhead)</td>
<td>Caroline Stuke</td>
<td>(631) 208-2038</td>
<td><a href="mailto:cstuke@esboces.org">cstuke@esboces.org</a></td>
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<tr>
<td>COURSE</td>
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<tr>
<td>Animal Science</td>
<td>9.1 - 12</td>
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<td>Automotive Technology (Engine Electric)</td>
<td>8.0</td>
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<tr>
<td>Automotive Technology (Engine Performance)</td>
<td>8.0 - 12+</td>
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<td>Automotive Technology (Engine Transmissions)</td>
<td>8.0</td>
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<tr>
<td>Aviation/Professional Pilot Training</td>
<td>12</td>
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<tr>
<td>Barbering</td>
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<td>11.4</td>
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<tr>
<td>Certified Personal Trainer</td>
<td>10.3 - 12+</td>
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<td>Clinical Medical Assisting</td>
<td>9.5 - 12+</td>
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<td>Cosmetology</td>
<td>7.5 - 9.9</td>
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<td>Culinary Arts/Restaurant Operations Management</td>
<td>7.5 - 12+</td>
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<td>Early Childhood Education</td>
<td>8.9 - 12+</td>
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<td>10.3 - 11.9</td>
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<tr>
<td>Fashion Merchandising and Design</td>
<td>11.2 - 12+</td>
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<tr>
<td>Heating, Ventilation and Air Conditioning (HVAC)</td>
<td>8.9 - 12+</td>
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<tr>
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<td>8.4 - 12+</td>
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<td>10.1 - 12+</td>
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<td>Plumbing and Heating</td>
<td>5.7 - 12</td>
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<td>Practical Nursing</td>
<td>10.1</td>
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<tr>
<td>Professional Photography and Digital Imaging</td>
<td>10.1 - 12+</td>
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<tr>
<td>Television, Video and Digital Film Production</td>
<td>8.9 - 12+</td>
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<tr>
<td>Welding/Metal Fabrication</td>
<td>10.3 - 12+</td>
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In order to receive this recognition, each program was reviewed by a team of experts from the Technical Assistance Center to ensure that we met their standards in the following areas:

- Strong curriculum that aligns with state, industry and academic standards and, at the secondary-level, preparing students for today’s business and industry environments and post-secondary opportunities.
- Project-based and contextualized learning and related instructional approaches providing opportunities for students to apply technical, academic and employability knowledge and skills to real-life situations. Instruction is differentiated and personalized to meet the diverse learning styles, needs and interests of students. The learning experiences are organized and facilitated in a manner that creates a positive classroom culture.
- Multiple forms of assessment, including performance assessment, to evaluate student attainment of technical, academic and employability knowledge and skills which are aligned to program standards and curriculum and are appropriate to students’ level of knowledge and skill attainment. Assessments are valid and reliable, and data from assessments is used for continuous program improvement.
- Diverse range of partners including employers, industry representatives, community/workforce/economic development agencies, and education stakeholders. The program conducts outreach activities to develop partnerships.
- Opportunities for students to obtain articulation with two- or four-year institutions to prepare students for the transition from high school to post-secondary study in a career area — they provide direct benefits to students such as dual credits, college credits, advanced standing or reduced tuition.
- Work-Based Learning (WBL) experiences providing students with opportunities to apply knowledge and skills learned in the classroom to real-world situations. These experiences engage local businesses and industry partners and increase the relevancy of classroom instruction.
- Facilitates and equipment in the CTE program reflecting current workplace practices, support and align to curriculum standards, and meet appropriate federal, state, and local safety standards.

We look forward to acknowledging staff, more programs, and buildings in the near future.

Congratulations to the Staff at WTC on a job well done!

The following programs at the Harry B. Ward Technical Center have been recognized by the NYS CTE Technical Assistance Center as Model Programs:
Eastern Long Island Academy of Applied Technology

Exploring Your Opportunities
Discover your inner *animal lover*!

If providing high quality, humane care to animals during all stages of their lives is important to you, consider a career in animal science.

Job opportunities in the field of animal science are surprisingly diverse, including veterinary care, grooming, retail store services, pet-sitting, behavioral training, the pet food industry, humane societies, bio-medical laboratories, marine and theme parks, wildlife refuges and zoos.

This program will provide you with hands-on experience with animals at the Cornell Cooperative Extension as well as a local horse farm.

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*Advanced college/trade school credit is available to qualifying students from the following institutions:*
COURSE TITLE: ANIMAL SCIENCE

COURSE DESCRIPTION
Animal Science is designed to prepare students who are pursuing animal related careers and can be used as a college preparatory course for those interested in furthering their education in applied sciences.

This course provides students with the opportunity to work with a wide variety of animals. Classroom environment simulates procedures performed in veterinary hospitals, grooming shops and kennel facilities. Students are also provided with hands-on experience with farm animals at Cornell Cooperative Extension and at local horse farms.

COURSE CONTENT – First Year
- Comparative Anatomy and Physiology
- Introduction to Grooming
- Handling and Restraining Techniques
- Animal Husbandry
- Animal Behavior
- Parasitology
- Diagnostic Testing
- Introduction to Pharmacology

COURSE CONTENT – Second Year
- Equine Science
- Advanced Grooming
- Exotic Animal Care and Handling
- Diagnostic Procedures
- Surgical Nursing
- Reproductive Management
- Marine Science

EDUCATIONAL OPPORTUNITIES
Associate and Baccalaureate degrees in the animal health care field

CAREER OPPORTUNITIES
- Zoos and Wildlife Facilities
- Aquariums
- Veterinary Hospitals
- Kennels
- Farms
- Humane Societies and Animal Control Facilities
- Animal Shelters
- Diagnostic Laboratories
- Spay and Neuter Clinics
- Bio-Medical Research Facilities

SUGGESTED SUPPORTIVE COURSES
Living Environment

ADDITIONAL INFORMATION
RELATED COURSES ........................................... Clinical Medical Assisting, Nurse Assisting
COSTS ........................................................ Uniforms approximately $30; tools $50-$60
LENGTH OF COURSE ...................................... 1 or 2 years
LOCATIONS ..................................................... Gary D. Bixhorn Technical Center
........................................................... Harry B. Ward Technical Center
CTE/ACADEMIC CREDIT ................................. 1 year = 1 credit ELA or 1 credit science
.................................................................. 2 years = 1 credit ELA and 1 credit science
.................................................................. (2 years = MAXIMUM 2 academic credits)
The art and design field knows no boundaries. Nearly every product around us, from the books we read to the clothes we wear, is influenced by the work of artists and designers. Today's artist needs to be prepared and skilled in a variety of tools, techniques as well as in design theory. The Art, Design and Visual Communications program provides opportunities with REAL clients and work experience. In this working studio environment, you will become familiar with the tools, techniques and theory needed to succeed. Through design projects, collaborative activities with related career classes and actual work experience, students are exposed to all facets of design and a multitude of career paths, allowing them to create a well-rounded portfolio and valuable entry-level employment skills as well as preparation for higher education. Today's artists are the problem-solvers of tomorrow and the ADVC class is where that successful future begins.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: ART, DESIGN AND VISUAL COMMUNICATIONS

COURSE DESCRIPTION
Through career related, project-based and hands-on experiences, students enrolled in this creative class will develop a portfolio and foundation skill sets needed to enter various design fields and creative industries. Students will learn the basics of illustration with traditional and digital media, composition, design and color theory, team building and communication skills, as well as industry standard design software programs needed on any designer’s resume. The combination of the skills developed and applied, along with hands-on client work experiences, will enable students to create a portfolio worthy of college acceptance and entry-level work positions. Students also have the opportunity to earn industry recognition and college credit.

COURSE CONTENT
Use of Studio Tools and Equipment
Layout and Composition Fundamentals
Elements and Principles of Design
Color Theory and Application
Typography / Anatomy of Letterforms
Concept Development
Workplace Safety and Health
Professionalism and Work Ethics

Client Work Experience
Character and Team Building
Portfolio Development
Digital Design / Computer Graphics
Digital and Traditional Illustration
Creative Application of Traditional and Digital Media
Project-Based Career Exploration

Desktop Publishing
Basic 2-D Animation
Presentation Graphics
Pre-Production Art / Storyboards
Package Design
Product Concept Development
Advertising Design
Web Design Basics

EDUCATIONAL OPPORTUNITIES
Associate Applied Science
Advanced College Standing
Baccalaureate Fine Arts

CAREER OPPORTUNITIES
Graphic Artist for Print Materials
Medical Illustrator
Storyboard Artist for TV or Film
Typographer
Graphic Artist for Web
Environmental Graphics and Design
Tattoo Artist
Advertising Designer
Photo Retouching / Restoration
Make-Up Artist
Production Artist
Museum Technician
Muralist / Custom Painting
Illustrator / Cartoonist
Art Director
Fine Artist
Fine and Commercial Artist
Set Designer
Art Therapy
Animator
Product Stylist
Art Educator
Technical Illustration
Interior Design
Art Historian
Textile Designer
Web Design
Curator
Industrial Designer
Calligrapher
Product Developer

ADDITIONAL INFORMATION
RELATED COURSES
Computer Science and Web App Development
Computer Technology and Repair
Fashion Merchandising and Design
Professional Photography and Digital Imaging
Television, Video and Digital Film Production

COST
Approximately $50 to $70 for various art supplies, sketchbook and SkillsUSA professional membership fee

LENGTH OF COURSE
1 or 2 years

LOCATION
Gary D. Bixhorn Technical Center

CTE/ACADEMIC CREDIT
1 year = 1 credit ELA and 1 credit General Ed – Art
2 years = 1 credit ELA and 1 credit General Ed – Art
(2 years = MAXIMUM 2 academic credits)
Get ready to change your tune! Here’s your opportunity to learn all about studio recording, live concert sound, digital audio production, and electronic music. You’ll also become familiar with the skills producers need to be successful in the business end of this exciting industry. Either way, the audio production program is for you!

Learn how to succeed in an industry that continues to change and grow. With our state-of-the-art equipment, you will learn how to take charge of your recording sessions and live music events.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: AUDIO PRODUCTION

COURSE DESCRIPTION
Audio Production is designed to give the student exposure to basic audio production techniques. This will be inclusive of live sound reinforcement, multi-track audio recording, as well as electronic instrumentation operation and composition basics. The student will play an active role as audio technician, engineer and producer, learning the fundamentals using industry standard equipment such as audio mixing consoles, microphones, digital tape recorders as well as virtual multi-tracking and editing systems. Instruction will also cover equipment installation and maintenance. Students will write, produce, engineer, mix and master their own projects. These projects include sound reinforcement for theater and musical performance, sound mixing for in-studio television production and post-production and original soundtrack composition for film, television and the music industry.

COURSE CONTENT
- Audio Equipment Use
- Basic Production Skills
- Microphone Technique
- Midi Instrumentation and Sequencing
- Careers in Audio Engineering and Recording Industry
- Advertising
- Digital Multi-Track Recording
- Voice-Over Technique and Diction
- Careers in Broadcasting

EDUCATIONAL OPPORTUNITIES
- AAS Broadcast Journalism
- BS Journalism, Broadcasting
- BFA Communication Arts

CAREER OPPORTUNITIES
- Audio Engineer
- Producer
- Public Relations Specialist
- Announcer/Voiceover Artist
- Audio Technician
- Arranger
- Production Manager
- Newscaster
- Audio Sales and Support Services

SUGGESTED SUPPORTIVE COURSES
- English, Public Speaking, Music, Television, Video and Digital Film Production

ADDITIONAL INFORMATION
- RELATED COURSE: Television, Video and Digital Film Production
- COST: $50–$100 for various media
- LENGTH OF COURSE: 1 or 2 years
- LOCATIONS: Edward J. Milliken Technical Center, Harry B. Ward Technical Center
- CTE/ACADEMIC CREDIT: 1 year = 1 credit ELA or 1 credit science, 2 years = 1 credit ELA and 1 credit science (2 years = MAXIMUM 2 academic credits)
Get set for a high tech finish!

Come join the booming, high-paying field of auto body repair and after-market accessory installation. You will train hands-on as a collision repair and refinishing specialist, as well as work with today’s brand name products in an exciting, evolving, high-tech environment. This course will prepare you to take I-Car Certificate Modules as well as teach you the skills needed to provide outstanding service to your customers and the communication skills needed to interact with other professionals in this growing industry.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: AUTO BODY REPAIR AND CAR CUSTOMIZING

COURSE DESCRIPTION
This program gives students the opportunity to learn how to dismantle and reassemble damaged automobile components, straighten metal parts and car frames, straighten dents, use filler compounds, grinding techniques and prepare a car for the refinishing shop. Students will also learn how to select and mix paint according to the latest EPA guidelines as well as the proper techniques in spray painting. Students will also gain hands-on experience in after-market auto accessory installation.

COURSE CONTENT
Hydraulic Power Units
Estimating/Billing
Basic Metal Straightening/Repair
Plastic Filler Application
Auto Body Refinishing in a Spray Booth
Removal/Alignment and Replacement of Welded Units
MIG Welding
Body Refinishing
Car-O-Liner Bench
Repair of Frame and Unified Construction on EZ Liner
Chief Frame Machine

EDUCATIONAL OPPORTUNITIES
Advanced College Standing  Two-Year Technical College
Associate Degree or Certificate  Baccalaureate Degree

CAREER OPPORTUNITIES
Parts Representative  Auto Parts Dismantler/Recycler
Service Writer  Paint/Refinisher
Sander  Pinstriper
Service Manager  Heavy Collision Repairer
Polisher  Rental Car Agency
Custom Sound System Installer  Body Assembler
Masker  Window Tinter
Auto Body Supply Stock Person  Speaker Installer
Welder  Fiberglass Body Repairer
Auto Restoration  Insurance Adjuster
Frame Person  Interior Shaper and Auto Detailer
Used and New Car Lot Attendant  Ground Effects
Satellite Installer

ADDITIONAL INFORMATION
RELATED COURSE .................................... Automotive Technology
COSTS ................................................ Uniforms approximately $30; Tools $125; respirator $30
LENGTH OF COURSE ............................... 2 years
LOCATIONS ........................................ Edward J. Milliken Technical Center
                                         Harry B. Ward Technical Center
CTE/ACADEMIC CREDIT ............................. 2 years = 1 credit ELA, 1 credit math and 1 credit science
                                         (2 years = MAXIMUM 3 academic credits)
INDUSTRY CERTIFICATION ....................... I-Car Certification
Tune up your career in this growing field which offers job opportunities in a wide variety of areas. You will gain the hands-on training you need in computer diagnostics, engine performance, automotive electronics, transmission repair, brakes, suspensions and more. You will also have an opportunity to work alongside automotive service technicians in some of the best dealerships in Suffolk County.

Make your passion your profession!

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: AUTOMOTIVE TECHNOLOGY

COURSE DESCRIPTION
This two-year program meets requirements for Automotive Service Excellence (ASE) Certification and is certified by the National Automotive Technicians Education Foundation (NATEF). This program provides students with theory and practice in the use of tools, special equipment, technical manuals, computerized service equipment, service specifications, diagnosis and methods of repair through teamwork, problem solving and critical thinking skills. Students will be prepared for The National Institute for Auto Service Excellence examination and have the option to be approved by the New York State Department of Motor Vehicles in NY State Inspection. High achieving juniors will have the opportunity to enter the AYES Program, which is a two-year apprentice program, administered through The Academy with local dealerships, similar to cooperative learning.

COURSE CONTENT
- Engine Repair
- Automatic Transmission/Transaxle
- Manual Drive Train and Axle
- Suspension and Steering
- Brake Systems
- Electrical/Electronic Systems
- Heating and Air Conditioning
- Engine Performance

EDUCATIONAL OPPORTUNITIES
- Advanced College Standing
- Associate Degree
- Baccalaureate Degree
- Two Year Technical College

CAREER OPPORTUNITIES
- Automotive Specialized Technician
- Parts Associate
- Automotive Technician
- Service Advisor
- Customer Service Advisor
- Service Associate
- Lubrication Technician

SUGGESTED SUPPORTIVE COURSES
- Algebra and Living Environment

Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 75% on the Algebra Regents and a minimum of 75% on the Living Environment Regents.

ADDITIONAL INFORMATION
- RELATED COURSE: Auto Body Repair and Car Customizing
- COSTS: Uniforms and shoes $30 – $70
- LENGTH OF COURSE: 2 years
- LOCATIONS: Edward J. Milliken Technical Center, Harry B. Ward Technical Center
- CTE/ACADEMIC CREDIT: 2 years = 1 credit ELA, 1 credit math and 1 credit science
  (2 years = MAXIMUM 3 academic credits)
- INDUSTRY CERTIFICATION: Automotive Service Excellence (ASE)
Soar above it all!

You look up into the sky every time you hear an airplane passing! You’ve been thinking about learning to fly for a long time, probably since you were a kid, but you haven’t taken that first step to turn your dream into a reality. Well, now is the time. Our Aviation/Professional Pilot Training program at the Bixhorn Technical Center prepares students to receive their Federal Aviation Administration (FAA) Private Pilot Certificate. Soar above your friends! Learn to fly with The Academy!

“To invent a plane is nothing, to build one is something, to fly is everything.” — Otto Lilienthal

Advanced college/trade school credit is available to qualifying students from the following institutions:

Farmingdale State College
State University of New York

Emory-Riddle Aeronautical University
COURSE TITLE: AVIATION/PROFESSIONAL PILOT TRAINING

COURSE DESCRIPTION — FIRST YEAR
The students will study aerodynamics, navigation, meteorology, aviation physiology, airplane performance and air traffic control procedures. They will operate actual aircraft as well as flight simulators. All students will take the FAA Private Pilot's Written Exam (FAA testing procedures apply) at the end of the first year.

COURSE CONTENT
Science of Meteorology  Basic Sciences of Pre-Flight (Ground School)
Airport Design  Navigation and Related Mathematics
Radio Communications  Airplane Construction
Air Traffic Control  Aerodynamics and Related Sciences

COURSE DESCRIPTION (OPTIONAL) — SECOND YEAR
Only those students who have met the eligibility requirements outlined below, demonstrate the ability and have a strong desire to become aviation professionals will be offered a second year program. The second year student may be given the opportunity to earn a Private Pilot's Certificate and work with business and local industry in an aviation related capacity.

EDUCATIONAL OPPORTUNITIES
Advanced College Standing

CAREER OPPORTUNITIES
Pilot
Air Traffic Controller
Military
Aircraft Dispatcher
Ground Instruction

SUGGESTED SUPPORTIVE COURSES
Algebra and Earth Science

Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 80% on the Algebra Regents and a minimum of 80% on the Earth Science Regents.

ADDITIONAL INFORMATION
RELATED COURSES .................... Computer Science and App Development, Drone Technology, Engineering

COSTS ................................. First Year:
Approximately $12 for required charts and $21 for professional pilot shirt;
Written exam fee approximately $150 first year;
FAA medical exam approximately $75-$125

Second Year:
Equipment and study material $100 per year;
Final FAA flight test $500;
Aircraft rental $150;
Optional summer flight instruction $1,500

LENGTH OF COURSE............... 2 years

LOCATION .............................. Gary D. Bixhorn Technical Center

CTE/ACADEMIC CREDIT .......... 2 years = 1 credit ELA, 1 credit math and 1 credit science
(2 years = MAXIMUM 3 academic credits)

INDUSTRY CERTIFICATION ....... FAA Private Pilot's written exam
Cut your way to a great career!

In this program, you will learn styling, shear and clipper cutting, rolling and texturing of hair, facial grooming, and shaving techniques. Your training will prepare you for the New York State Barber Practical Examination—required to become a licensed master barber. In addition, you will learn the business and communication skills you need to own and operate your own business. Bring your excitement and enthusiasm to this program and cut your way to a great career.
COURSE TITLE: BARBERING

COURSE DESCRIPTION
This course is a combination of classroom instruction and laboratory opportunities that will develop academic and professional knowledge as well as skills required for job acquisition, retention and advancement. This program emphasizes specialized training in safety, sanitation, shaving, reception, precision shear and clipper cutting, sales, and can create opportunities for small business ownership.

The curriculum is designed to give an overview of the barbering industry, licensing and the opportunities for professional growth. Students who successfully complete this 500 hour course will be eligible to sit for the New York State Licensing Board Exam. Students must be at least 17 years of age to take the New York State Barber Practical Examination.

EDUCATIONAL OPPORTUNITIES
Advanced College Standing
Two-Year Technical College
Associate Degree or Certificate

CAREER OPPORTUNITIES
Master Barber
Barbershop Owner
Barbering Instructor
Platform Artist

SUGGESTED SUPPORTIVE COURSES
Business, Health, Living Environment

ADDITIONAL INFORMATION
RELATED COURSE: Cosmetology
COSTS: Approximately $500 for complete kit which includes uniform, workbook and all tools required to complete this course and work in a barbershop

LENGTH OF COURSE: 1 year
LOCATION: Gary D. Bixhorn Technical Center

CTE/ACADEMIC CREDIT: 1 year = 1 credit ELA or 1 credit science (1 year = MAXIMUM 1 academic credit)

INDUSTRY CERTIFICATION: New York State Licensed Master Barber
A good career is **built** on a solid **foundation**!

**Growth** in the service industry has resulted in greater demand for skilled construction workers. Become familiar with the tools used in commercial construction as well as the materials used by builders, including lumber, concrete, drywall, roofing, fasteners and a wide variety of hardware. Over the course of a two-year program, students will tackle numerous hands-on projects, including full construction of a residential building. Qualifying students will have the opportunity to earn enhanced eligibility toward a five-year apprenticeship with the Empire State Regional Council of Carpenters Apprenticeship Program.

**Advanced college/trade school credit** is available to qualifying students from the following institutions:
COURSE TITLE: CARPENTRY/RESIDENTIAL CONSTRUCTION AND HOME IMPROVEMENT

COURSE DESCRIPTION
The carpentry program is a combination of hands-on skill development and technical training in order to prepare students for entry-level employment or higher in residential construction, home improvements and related fields. Students will actively build and/or renovate a three bedroom, Energy Star® rated ranch on-site using Brookhaven Town and Energy Star® building codes. Both renovation and alteration of existing residential structures are taught, and students evaluate their own work and keep an active portfolio as well as a notebook.

Students have the option of taking the National Center for Construction Education Research (NCCER) exam to be placed on the NCCER National Registry. The Registry provides valuable industry credentials for students as they seek employment and build their careers. Students will take the OSHA-10 course in their first year of study with the goal of obtaining the OSHA-10 card.

COURSE CONTENT
Floor Framing and Sub Flooring
Wall Framing
Roof Framing, Skylights
Sheathing, Siding and Roofing
Re-Siding and Re-Roofing
Building Trusses

Drywall and Interior Trim to Include Spackle and Tape (stilt work)
Soffits and Fascias
Replacing Windows and Doors
Scaffolds and Ladder Safety
Door and Window Installation

EDUCATIONAL OPPORTUNITIES
Advanced College Standing
Associate Degree/Construction

Articulation Agreement with Carpenter's Union
Baccalaureate Degree/Architecture

CAREER OPPORTUNITIES
Carpenter, Apprentice, Helper
Lumber Yard Person
Roofer
Siding Mechanic
Truss Fabricator
Dock Builder
Mill Person
Flooring Installer

Framer
Exterior/Interior Trimmer
Taper/Spackler
Estimator
Drywall Installer
Landscaper/Carpenter
Home Improvement Contractor

SUGGESTED SUPPORTIVE COURSES
Algebra, Business, Mechanical Drawing, Technology

ADDITIONAL INFORMATION
COSTS ................................................................. Approximately $250 personal tools, work shoes and work jeans
LENGTH OF COURSE ........................................... 2 years
LOCATION .......................................................... Gary D. Bixhorn Technical Center
CTE/ACADEMIC CREDIT ...................................... 2 years = 1 credit ELA and 1 credit math
(2 years = MAXIMUM 2 academic credits)
INDUSTRY CERTIFICATION: .............................. National Center for Construction Education and Research (NCCER)
National Registry
Welcome to today’s health-conscious world! People are more interested than ever in losing weight, toning muscle, improving diet and living healthier lives. If fitness is your passion and you enjoy working with people, a career in personal training may be perfect for you. In this exciting and expanding field, you will have an opportunity to design weight-training and nutritional programs, help people gain greater self-esteem and see the results of your skills “take shape” every day. This course will offer you the opportunity to earn your National Personal Trainer certification through International Sports and Science Association (ISSA) making you fit for a great new career!
COURSE TITLE: **CERTIFIED PERSONAL TRAINER**

**COURSE DESCRIPTION**
This physical course includes anatomy, kinesiology, injury prevention, supplementation and nutrition, and all aspects of cardio and strength training and more. A world-renowned staff of researchers, scientists, sports medicine specialists and world champion athletes created the certificate program that this course follows. The course is specifically designed to bridge the gap between clinical exercise, related course work and the practical application of sound health and fitness programming. Students will have the opportunity to earn a nationally-recognized certification from the International Sports Sciences Association upon successful completion of the course.

The second year will infuse the latest technologies from the healthcare and fitness industries into the Certified Personal Trainer curriculum. Students then have the opportunity to provide a supervised fitness program designed around a medical condition. Students will have the opportunity to earn a certification in Fitness/Exercise Therapy from the International Sports Sciences Association upon successful completion of the second year of this course.

**COURSE CONTENT – First Year**
- Scientific Foundations of Physical Activity and Fitness
- Nutrition, Body Composition and Weight Management
- Components of Fitness
- Special Populations
- Exercise Prescription
- Exercise Programming Considerations

**EDUCATIONAL OPPORTUNITIES**
- Advanced College Standing
- Associate Degree
- Baccalaureate Degree

**CAREER OPPORTUNITIES**
- Certified Personal Trainer
- Sports Team Conditioner
- Exercise Instructor
- Physical Therapy
- Private Health Club
- Strength Coach
- Fitness and Exercise Therapist

**SUGGESTED SUPPORTIVE COURSES**
- Health, Living Environment

**ADDITIONAL INFORMATION**
- RELATED COURSES: Clinical Medical Assisting, Nurse Assisting, Pharmacy Technician, Physical Therapy Aide
- COSTS: Workbook, CPR and CPT certification costs, approved fitness uniform: total $180; $20 field trips
- LENGTH OF COURSE: 1 or 2 years
- LOCATION: Gary D. Bixhorn Technical Center
- CTE/ACADEMIC CREDIT: 1 year = 1 credit ELA or 1 credit math or 1 credit science; 2 years = 1 credit ELA or 1 credit math or 1 credit science (2 years = MAXIMUM 2 academic credits)
- INDUSTRY CERTIFICATION: Personal Training, International Sports Sciences Association (ISSA) Fitness/Exercise Therapy (ISSA)
Employment opportunities for medical assistants are growing fast. Prospects are exceptionally bright for those with formal training and certification. This course encompasses the study of anatomy and physiology, medical terminology, clinical and laboratory procedures, as well as medical law and ethics. A local clinical internship is required in this program and you also have the opportunity to attain the Certified Health Professionals (CHP) and CPR/BLS certifications.

Vital signs are excellent for Medical Assistants!

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: **CLINICAL MEDICAL ASSISTING**

**COURSE DESCRIPTION**
This course is designed to provide basic training in medical assisting skills such as: phlebotomy, EKG, medical terminology, first aid and CPR. Successful completion enables students to become additionally certified. Emphasis is placed on preparing students for work in the health care industry. It provides fundamental theories and principles needed by all health care providers in the legal aspects of the industry, as well as professional behavior skills. Safety is emphasized throughout the course.

Students who successfully complete Clinical Medical Assisting and Nurse Assisting courses may be eligible for Patient Care Technician certification.

**COURSE CONTENT**
- Basic Administrative Duties
- Medical History Taking
- Vital Signs
- Medical Terminology
- Medical Law and Ethics
- Standard Precautions
- Anatomy and Physiology
- Physical Measurements
- Assisting with Exams
- Assisting with Minor Surgery
- Lab Techniques
- Patient Education
- Patient Preparations
- Collection and Preparation of Lab Specimens
- Sterilization Techniques
- First Aid/CPR/AED
- Phlebotomy
- Pharmaceutical Preparation and Administration
- Electrocardiogram
- Career Development
- Professionalism
- Clinical and Diagnostic Procedures

**EDUCATIONAL OPPORTUNITIES**
There are over 80 allied health professions, including Practical Nurse (PN) and Registered Nurse (RN), offered by post-secondary vocational schools, baccalaureate schools, upper division medical schools and community or junior colleges.

**CAREER OPPORTUNITIES**
- Hospital Admissions Departments
- Hospital Radiology Departments
- Skilled Nursing Facilities
- Psychiatric Institutions
- Private Medical Offices
- Hospital Patient Care Departments
- Patient Care Units
- Hospital Laboratory Departments
- Hospital Medical Records Departments
- Drug or Alcohol Rehabilitation Centers
- Private Laboratories
- Medical Clinics

**SUGGESTED SUPPORTIVE COURSES**
- Algebra, Living Environment

Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 75% on the Algebra regents and a minimum of 75% on the Living Environment regents.

**ADDITIONAL INFORMATION**
- RELATED COURSES: Animal Science, Certified Personal Trainer, Dental Chairside Assisting, Nurse Assisting, Physical Therapy Aide, Practical Nursing
- COSTS: Materials/uniforms approximately $150; workbook $140; Physical exam required: CHP exam $140; EKG exam $160; Phlebotomy exam $160
- LENGTH OF COURSE: 1 year
- LOCATIONS: Edward J. Milliken Technical Center, Harry B. Ward Technical Center, Clinical experience with a local hospital or medical office
- CTE/ACADEMIC CREDIT: 1 year = 1 credit ELA or 1 credit math or 1 credit science, and .5 General Ed credit – Health (1 year = MAXIMUM 1.5 academic credits)
- INDUSTRY CERTIFICATIONS: Certification in Phlebotomy, EKG, CPR/BLS and/or Clinical Medical Assisting through Certified Health Professionals (CHP)
Jobs in computer science and application development are among the highest paid and most in-demand in today’s economy. Computing drives innovation in science, engineering, business, entertainment, and education. A solid foundation in computer science will provide you with the problem-solving skills and logical thinking that will give you a competitive advantage in your career, whatever field you choose. Mastering the language of computing can provide you with a critical advantage in the job market. Whether you want to be a scientist, technician, or engineer, or want to develop the next “killer app,” here’s your opportunity to step into one of today’s hottest fields.
COURSE TITLE: COMPUTER SCIENCE AND APP DEVELOPMENT

COURSE DESCRIPTION
Students will be exposed to a diverse set of computational thinking concepts, fundamentals and tools, allowing them to gain understanding and build confidence. Students use visual, block-based programming and seamlessly transition to text-based programming with languages such as Python® to create apps and develop websites, and learn how to integrate computers to put their design into practice. This course will also focus on further developing computational thinking skills through the medium of Android™ App development for mobile platforms. The course utilizes industry-standard tools such as Android Studio, Java™ programming language, XML and device emulators. Students collaborate to create original solutions to problems of their own choosing by designing and implementing user interfaces and Web-based databases. Projects and problems include app development, visualization of data, cybersecurity and simulation. PLTW® is recognized by the College Board as an endorsed provider of curriculum and professional development for AP® Computer Science Principles (AP CSP). This endorsement affirms that all components of PLTW® Computer Science Program's offerings are aligned to the AP Curriculum Framework standards and the AP CSP assessment. This course also aligns with the AP CS A course.

EDUCATIONAL OPPORTUNITIES
Students will take the AP® Computer Science Principles exam. Students who earn a 3 or higher will be eligible for college credit. Advanced students will be encouraged to take the AP Computer Science A exam as well. There is an additional cost to take the exams.

SUGGESTED SUPPORTIVE COURSES
Math A and B, Physics
Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 80% on the Algebra Regents and a minimum of 80% on the Living Environment Regents.

ADDITIONAL INFORMATION
RELATED COURSES .................................................. Aviation/Professional Pilot Training, Computer Technology and Repair, Engineering
COSTS ............................................................. Uniform and supplies approximately $200
LENGTH OF COURSE ........................................... 1 year
LOCATION ......................................................... Gary D. Bixhorn Technical Center
CTE/ACADEMIC CREDIT .................................. Pending
Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: **COMPUTER TECHNOLOGY AND REPAIR**

**COURSE DESCRIPTION**
This combined course is designed to prepare students with practical experiences and related theory leading to an entry-level position as a Computer Repair Technician. Students will learn how to use test equipment and software to troubleshoot and correct common personal computer problems. Students will receive the necessary instruction to prepare for the A+ Certification exam at the completion of Year 1. The A+ Certification is recognized industry-wide and represents six months of work-related experience. This course is also designed to give students core knowledge of information systems, development and project management. Students will also be given the opportunity to take Microsoft Technology Associate (MTA) Certification. This certification will demonstrate the student’s fundamental knowledge of hardware, IT infrastructure or software technology. If students return for the second year of the program, they will prepare for the Network+ Certification.

**COURSE CONTENT—Year 1**
- Basic Electricity
- Digital Electronics
- Electronic Circuit Troubleshooting
- Microprocessor Fundamentals
- Computer Hardware
- Hardware/Software Troubleshooting
- Data Communications
- Network Cabling
- Customer Service
- Operating Systems
- System Boards
- Input/Output Devices
- Data Storage
- Printer Servicing
- Video Displays
- Multimedia Hardware
- Preventive Maintenance
- VR Headsets
- 3D Printers
- Cloud Computers

**COURSE CONTENT—Year 2**
- Advanced PC Hardware
- Advanced Networking
- Low Voltage
- Local Area Networks
- Routers and Switches

**EDUCATIONAL OPPORTUNITIES**
- Advanced College Standing
- Two Year Technical College
- Associate Degree or Certificate

**CAREER OPPORTUNITIES**
- Computer Repair Technician
- Bench Tester
- Network Cable Technician
- Technical Representative
- Related Retail and Sales Positions
- Security and SMCA Home Technician
- Low Voltage Technician

**SUGGESTED SUPPORTIVE COURSES**
- Algebra, English, Living Environment

Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 75% on the Algebra Regents and a minimum of 75% on the Living Environment Regents.

**ADDITIONAL INFORMATION**
- RELATED COURSES: Art, Design and Visual Communications, Computer Science and App Development, Engineering
- COST: Workbook $75
- LENGTH OF COURSE: 1 or 2 years
- LOCATION: Gary D. Bixhorn Technical Center
- CTE/ACADEMIC CREDIT: 1 year = 1 credit ELA
  - 2 years = 1 credit ELA
  - (2 years = MAXIMUM 1 academic credit)
- INDUSTRY CERTIFICATIONS: A+ Computer Repair, Microsoft Technology Associate (MTA), Network+ Certification, OSHA-10
Your future is looking good!

ADD STYLE to your career! Enter the dynamic field of cosmetology at The Academy and gain hands-on experience in hairstyling, hair coloring, skin care, make-up, chemical texturizing, and nail technology. Your training will prepare you to take the New York State Cosmetology Examination to become a licensed cosmetologist. You will also learn what it takes to run a successful business!

Advanced college/trade school credit is available to qualifying students from the following institutions:

EASTERN LONG ISLAND ACADEMY OF APPLIED TECHNOLOGY
COURSE TITLE: COSMETOLOGY

COURSE DESCRIPTION
Instruction is provided along with hands-on experience in hair shaping, styling and chemical services, including hair coloring, permanent waving, body waves and chemical relaxing. Encompassed within the curriculum are treatments of the hair and scalp, facials, all aspects of make-up, nail care and artificial nails. The course also teaches the business and science-related aspects of cosmetology and salon management. A cosmetology license qualifies graduates to work with hair, skin and nails, as well as allows specialization in any area of cosmetology. This license will unlock countless doors within the beauty industry. Students who successfully complete this 1,000 hour course over two years will be eligible to sit for the New York State Board Licensing Exam.

COURSE CONTENT
Care of Hair and Scalp
Hair Cutting Techniques and Shaping
Hair Styling and Thermal Curling
Braiding and Hair Extensions
Chemical Relaxing and Permanent Waving
Hair Coloring and Hair Lightening
Wigs, Hair Pieces and Extensions
Skin Care and Make-Up Application
Manicuring and Artificial Nails Design
Pedicure and Paraffin Treatments
Salon Management and Salon Business
Related Theory

CAREER OPPORTUNITIES (licensed):
Natural Hair Stylist
Chemical Texturing Specialist
Haircutting Specialist
Hair Colorist
Platform Artist
Salon Manager/Owner
Esthetician (Skin Care Specialist)
Make-up Artist/Theatre, TV and Fashion
Instructor for Professional Products
Instructor – Private or Public School
Desairolgy
Nail Technician, Pedicurist

CAREER OPPORTUNITIES (not requiring a license):
Beauty Supply Sales Manager/Sales Clerk
Receptionist
Cosmetic Sales
Retail Consultant
Beauty Columnist
Manufacturer’s Representative

SUGGESTED SUPPORTIVE COURSES
Business, English, Living Environment

ADDITIONAL INFORMATION
RELATED COURSE ............................................Barbering
COSTS .........................................................Junior kit approximately $420
Seniour kit approximately $320
LENGTH OF COURSE ...................................2 years
LOCATIONS ...............................................Edward J. Milliken Technical Center
Harry B. Ward Technical Center

CTE/ACADEMIC CREDIT ..............................2 years = 1 credit ELA and 1 credit science
(2 years = MAXIMUM 2 academic credits)

INDUSTRY CERTIFICATION ..........................Upon completion of the second year, students are eligible to take
the New York State Cosmetology Licensing Exam.
Learn the secrets of the great chefs! In this course, you’ll gain foundational cooking skills and have the potential to earn ServSafe®, ProStart® and ACF Secondary Graduate professional certifications. Learn what it takes to succeed as a chef for a restauranteur in this exciting, high-profile industry. Get your career cookin’ today in the Culinary Arts/Restaurant Operations Management program.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: **CULINARY ARTS/RESTAURANT OPERATIONS MANAGEMENT**

**COURSE DESCRIPTION**
Our program begins with baking and pastry arts and moves into complete food preparation and management techniques. Students gain an understanding of baking and cake decorating, nutrition, menu planning, catering, dining food service, food production, as well as safety and sanitation codes. Second year students are prepared to take the National Restaurant ServSafe® test. The program has the accreditation of the American Culinary Federation (ACF) which provides students with the opportunity to earn a Certified Fundamentals Cook (CFC). The program is also associated with the New York State Restaurant Association (NYSRA) Educational Foundation ProStart® Program, which provides students with work experience necessary to succeed in the workplace.

**COURSE CONTENT**
- Professional Food Preparation and Service
- Health Regulations and Codes
- Preventative Safety
- Cooking Methods and Techniques
- Tools and Equipment
- Cost Control and Purchasing
- Weights and Measures
- Baking
- Menu Planning
- Pastry Skills
- Buffets and Banquets
- Trade Related Math
- Food Presentation/Styling
- Employability Skills
- Time Management
- Nutrition
- Table Service
- Food and Cultures
- Customer Service Skills
- Community Service Opportunities
- Catering
- Regional and Ethnic Cooking
- Ice Carving

**EDUCATIONAL OPPORTUNITIES**
- Advanced College Standing
- Associate Degree or Certificate
- Baccalaureate Degree
- Masters Degree

**CAREER OPPORTUNITIES**
- Institutional Food Service
- Corporate Theme Franchises
- Corporate Catering
- Hotels and Tourist Destinations
- Personal Chef
- Private Restaurants
- Airline, Railroad and Cruise Lines
- Fast Food Restaurants
- Restaurant Suppliers and Wholesalers
- Supermarkets (deli, bakery, meat and seafood)

**SUGGESTED SUPPORTIVE COURSES**
- Algebra, Written and Verbal Communication Skills

**ADDITIONAL INFORMATION**
- COSTS .................................................. 2 Uniforms, approximately $100; approved footwear $30; knife kit (optional) $75
- LENGTH OF COURSE ................................ 2 years
- LOCATIONS ............................................ Edward J. Milliken Technical Center
- Harry B. Ward Technical Center
- CTE/ACADEMIC CREDIT ............................. 2 years = 1 credit ELA, 1 credit math and 1 credit science
- (2 years = MAXIMUM 3 academic credits)
- INDUSTRY CERTIFICATIONS ........................ American Culinary Federation (ACF)
- Certified Fundamentals Cook (CFC)
- Certified Fundamentals Pastry Cook (CFPC)
- ServSafe®
- ProStart®
A wide-open career that’s worth **smiling** about!

Dental chairside assistants prepare patients for treatment, maintain instruments and equipment, work with patients’ dental records and instruct patients on post-operative and general oral health care. Employment in this field is growing, and opportunities are expected to be plentiful. A local clinical internship is required in this program which will start you on your way to a smart new career!

*Advanced college/trade school credit is available to qualifying students from the following institution:*
COURSE TITLE: DENTAL CHAIRSIDE ASSISTING

COURSE DESCRIPTION
Students will learn how to work chairside with the dentist, prepare dental materials, perform basic business procedures, prepare clients' data (i.e., processing insurance forms) and provide practical experience in radiology and four-handed dentistry. Students learn in a simulated environment equipped with the most current equipment and software in a setting where skills are taught with a strong emphasis on patient care and business application. Students gain experience through clinical practice in the field. This program will prepare students for a course of study in higher education for the New York State Dental Assisting Licensing Program.

COURSE CONTENT
Introduction to Dental Assisting  Personal Health and Grooming
Pre-Clinical Sciences  Chairside Procedures
Basic Laboratory Skills  Applied Psychology
First Aid and Emergency Treatment  Prevention and Control in Dental Health
General Office and Patient Routine  Expanded Functions
Basic Dental Sciences  Dental Specialties
Instrument Care  Office Management Skills
Film Exposure  X-Ray Processing
Practice Administration  X-Ray Mounting and Digital Technology

EDUCATIONAL OPPORTUNITIES
Certified Dental Assistant
Dental Lab Technician
Registered Dental Hygienist

CAREER OPPORTUNITIES
General Dentist  Oral Maxillofacial Surgery
Orthodontics  Pediatric Dentistry
Periodontics  Endodontics
Prosthodontics  Dental Insurance Company
Private Practice  Group Practices
Federal, State and Local Agencies  Armed Forces
Dental Supply Company

SUGGESTED SUPPORTIVE COURSES
Anatomy
Basic Computer Concepts
Chemistry, Living Environment

ADDITIONAL INFORMATION
RELATED COURSES .............................................Clinical Medical Assisting, Nurse Assisting, Physical Therapy Aide, Practical Nursing
COSTS ..........................................................Uniforms approximately $70; workbook/other supplies $70; complete physical exam required
LENGTH OF COURSE.................................1 year
LOCATION ............................................Gary D. Bixhorn Technical Center
CTE/ACADEMIC CREDIT .........................1 year = 1 credit ELA or 1 credit science and .5 General Ed credit—Health
(1 year = MAXIMUM 1.5 academic credits)
Join the next revolution in flight!

Take the controls and become a part of the technical innovation driving this incredible advance in personal and commercial flight technology, as drones reinvent everything from commercial inspection to real-estate marketing, surveying and mapping, military surveillance and even light shows and entertainment. Drone pilots, programmers and technicians are expected to be in increased demand, and those with training and certification will be at a distinct advantage, as this rapidly growing field expands into many new areas of science, technology and commerce.
COURSE TITLE: **DRONE TECHNOLOGY**

**COURSE DESCRIPTION**
Take the controls and become part of the technical innovation driving this incredible advance in personal and commercial flight technology. Drone Technology has the capacity to reinvent everything from commercial inspection to real estate marketing, surveying and mapping, military surveillance and even light shows and entertainment. As the demand for drone pilots, programmers and technicians increases, those with training and certification will be at a distinct advantage as this rapidly growing field expands into many new areas of science, technology and commerce.

Currently, the Federal Aviation Administration (FAA) allows for commercial use of drones. However, the FAA has released regulations which are expected to allow for much broader commercial use and will require pilots using unmanned aerial vehicles for commercial purposes to obtain certification of training or competence. Anticipating the commercial demand for drone training, this program will provide skills on piloting, engineering, programming and repairing drones.

**COURSE CONTENT**
- Program and operate robotic hardware and software
- Assemble robotic hardware
- Analyze programming used in robotics
- Autonomous and non-autonomous robots
- Laws of physics
- Programming controllers
- Installation and programming of sensors
- Controllers and drones
- Disassembly of drones and deprogramming controller

**EDUCATIONAL OPPORTUNITIES**
- Advanced College Standing
- Two-Year Technical College
- Associate Degree or Certificate

**CAREER OPPORTUNITIES**
- Aeronautics
- Agriculture
- Construction Inspection
- Law Enforcement/Military – Search and Rescue
- Photography and Cinematography
- Real Estate

**SUGGESTED SUPPORTIVE COURSES**
- Physics, Computer Programming

**ADDITIONAL INFORMATION**
- RELATED COURSES: Aviation/Professional Pilot Training, Engineering
- COSTS: Personal tools, uniform, and supplies $200
- LENGTH OF COURSE: 1 or 2 years
- LOCATION: Gary D. Bixhorn Technical Center
- CTE/ACADEMIC CREDIT: Pending
- INDUSTRY CERTIFICATION: FAA Drone Pilot Certification for Commercial Use
Find big rewards in a small world.

Prepare yourself with the skills you need for a future in teaching. Gain hands-on experience as a student teacher in our on-site preschool. Earn work experience in community-based Early Childhood programs as you work toward your Child Development Associate Credential. College credits are offered through this exciting technical education program.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: **EARLY CHILDHOOD EDUCATION**

**COURSE DESCRIPTION**
This course is designed to prepare students for careers as teachers or child care providers in early childhood education. The study of child development is included by direct hands-on work experience with children in our on-site preschool.

A second year option is available which prepares students to work toward the Child Development Associate (CDA), a nationally recognized credential that will qualify candidates to meet all state licensing requirements to work as a child care professional in any early childhood program in the United States. Students in the second year program participate in community-based internships to explore varied educational settings and student groups.

**COURSE CONTENT – Year 1**
- Career Planning and Preparation
- Observation and Assessment
- Child Development Principles and Theories
- Understanding Children from Birth–Age Eight
- Guidance Techniques
- Creating a Safe and Healthful Environment
- Curriculum Planning
- Learning Experiences for Children
- Guiding Children with Special Needs

**CLINICAL LAB PRACTICE – Year 1**
Students participate as teachers-in-training in an on-site preschool laboratory, working with children 3 to 5 years old. Students work in teaching teams with a rotation of job assignments and positions.

**COURSE CONTENT – Year 2**
- Community-Based Work Experience
- Classroom Management and Supervision
- Program Management
- Parent/Teacher/Community Relations
- First Aid/Pediatric CPR Certification

**CLINICAL LAB PRACTICE – Year 2**
Students serve in the lead teacher role in the on-site preschool laboratory, as well as participating in community-based field placements in their choice of settings including infant/toddler or preschool, daycare, Head Start, special education and early elementary grades.

**EDUCATIONAL OPPORTUNITIES**
- Associate Degree
- Baccalaureate Degree

**CAREER OPPORTUNITIES**
- Nursery Schools
- Recreation Facilities
- Elementary Schools
- Group Day Care Centers
- Special Education Facilities
- Family Home Day Care Provider
- Community Service Agencies
- Youth Centers

**SUGGESTED SUPPORTIVE COURSES**
- Human Development, Food and Nutrition, Parenting, and Child Psychology

**ADDITIONAL INFORMATION**

**COSTS**
- **First year:** Smock $25; portfolio box $15; notebook $5; misc. craft supplies $5; CPR certification $10 (CPR certification valid for two years)
- **Second year:** First Aid certification $25; (First Aid certification valid for two years); CDA book $20 (CDA book includes application packet/shipping and handling)

**LENGTH OF COURSE**
- 1 or 2 years

**LOCATIONS**
- Edward J. Milliken Technical Center
- Harry B. Ward Technical Center

**CTE/ACADEMIC CREDIT**
- 1 year = 1 credit ELA
- 2 years = 1 credit ELA
- (2 years = MAXIMUM 1 academic credit)

**INDUSTRY CERTIFICATION**
- Child Development Associate (CDA)
It’s an electrified world! From homes to sports stadiums to skyscrapers, we all depend on electricians to build and maintain the power systems that make modern life possible. This fast-paced program covers construction-based electrical concepts plus the newest means of generating energy including solar, wind, and geothermal technologies. So “get current” with the leading-edge skills to succeed in this evolving and well paying field!

More power to you!

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: **ELECTRICAL TRADE AND ALTERNATIVE ENERGY**

**COURSE DESCRIPTION**
This two-year program is a combination of hands-on skill development and technical training in order to prepare students for entry level employment or higher in the electrical trade. Students gain practice in traditional wiring methods and blueprint reading, as well as learn the latest renewable energy concepts including solar, wind, and geothermal technologies.

At the end of the second year, students will take the National Center for Construction Education Research (NCCER) exam to be placed on the NCCER National Registry. The Registry provides valuable industry credentials for students as they seek employment and build their careers.

**COURSE CONTENT**
- Series and Parallel Circuits
- Ohm’s Law/Power Law
- Electrical Codes
- Alternating Current Theory
- Trade Related Technical Math
- Residential/Commercial Wiring Methods

- Residential Service Installations
- Basic Troubleshooting Techniques
- Basic Electrical Measurements
- Raceways
- Motor Control Wiring
- Alternative Energy Sources

**EDUCATIONAL OPPORTUNITIES**
Associate Degree

**CAREER OPPORTUNITIES**
- Electrician’s Helper
- LIRR/MTA Entry-Level Apprenticeships
- IBEW Apprenticeships
- Building Electrical Maintenance Assistant
- Electrical Utility Apprenticeships

- Cable System Technician
- Geothermal Technician
- Wind Turbine Service Technician
- Entrepreneurship

**CAREER OPPORTUNITIES FOLLOWING ADDITIONAL COURSEWORK**
- Electrician
- Energy Retrofitting Specialist
- Energy Engineer
- Solar Photovoltaic Installer

- Solar Energy Manager
- Data and Telecommunications Technician
- Electrical Power Line Installer/Repairer

**SUGGESTED SUPPORTIVE COURSES**
- Algebra

Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 80% on the Algebra Regents and a minimum of 75% on the Living Environment Regents.

**ADDITIONAL INFORMATION**
- RELATED COURSE ................................Heating, Ventilation and Air Conditioning
- COSTS ..................................................Tools approximately $250; approved footwear approximately $35
- LENGTH OF COURSE .........................2 years
- LOCATIONS .........................................Gary D. Bixhorn Technical Center and Edward J. Milliken Technical Center
- CTE/ACADEMIC CREDIT ..........................2 years = 1 credit ELA, 1 credit math and 1 credit science
  (2 years = MAXIMUM 3 academic credits)
- INDUSTRY CERTIFICATION .....................National Center for Construction Education and Research (NCCER)
  National Registry
IMAGINE a BETTER future.

The first year of the Engineering program focuses on Intro to Engineering Design, Technology and Society and Robotics. The second year of the program focuses on Principles of Engineering and Advanced Design Applications. These opportunities lay a solid foundation and provide an unprecedented opportunity to create an engineering career path in high school.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: ENGINEERING

COURSE DESCRIPTION
Our Engineering program is a sequence of modules which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering prior to entering college. However, those not intending to pursue further formal education will benefit greatly from the knowledge and logical thought processes that result from taking the modules provided in the curriculum.

COURSE CONTENT– FIRST YEAR

Intro to Engineering Design: This course teaches problem-solving skills using a design development process. Models of product solutions are created, analyzed and communicated using solid modeling computer design software. In NYS, the course is called Design and Drawing for Production and follows the syllabus developed by the State Education Department.

Technology and Society: Students develop “intangible” opinions, attitudes, and positions and then use these to inform their designs of products, systems, and services. This course prepares all students, whether they intend to be engineers, cosmetologists, or parents, to make informed decisions about their individual, community, and organizational uses of technology.

Robotics: The Robotics curriculum will allow students the opportunity to learn how to program VEX robots. Students will be engaged in activities to become independent learners and problem solvers. They will learn basic programming concepts, in terms of programming computations and put their engineering skills to work.

COURSE CONTENT– SECOND YEAR

Principles of Engineering: Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

Advanced Design Applications: Focuses on three dimensions of technological literacy “knowledge, ways of thinking and acting, and capabilities” with the goal of students developing the characteristics of technologically literate citizens. It employs teaching/learning strategies that enable students to explore and deepen their understanding of “big ideas” regarding technology and makes use of a variety of assessment instruments to reveal the extent of understanding.

In addition to their coursework, students will have opportunities to earn other industry certifications. These certifications will set them apart from other students by preparing them for the workforce when they apply for careers or are accepted into colleges.

SUGGESTED SUPPORTIVE COURSES
Algebra, Geometry, Living Environment, Physics

Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 80% on the Algebra Regents and a minimum of 80% on the Living Environment Regents.

ADDITIONAL INFORMATION
RELATED COURSES .............................................Aviation/Professional Pilot Training, Computer Science and App Development, Computer Technology and Repair, Drone Technology

COSTS ............................................................Approximately $200 for uniform and supplies

LENGTH OF COURSE..........................1 or 2 years

LOCATION ......................................................Gary D. Bixhorn Technical Center

CTE/ACADEMIC CREDIT ...................1 year = 1 credit ELA or 1 credit science
2 years = 1 credit ELA or 1 credit science
(2 years = MAXIMUM 2 academic credits)
The Regional STEM High School was designed to meet the needs of local and national workforce demands in engineering and applied sciences.

For two and a half hours a day, 11th grade students will engage in open-ended problem solving, learn and apply the engineering design process, and utilize the same industry-leading technology and software used in the world's top companies.

During the other half of the day, students will complete their high school graduation requirements. AP Physics, AP Calculus, as well as other academics to earn a NYS Advanced Regents Diploma or Regents Diploma will be offered. A contextualized approach integrating these courses with engineering and applied science will bring more meaning to each student's learning experience.

These opportunities lay a solid foundation and provide an unprecedented opportunity to create an engineering career path in high school.

Among the great benefits of attending the Engineering program is the established relationships with colleges and universities.

Locally, Stony Brook University, St. Joseph's College, Vaughn College and Farmingdale State College are involved in our initiative, and offer support for our students in a variety of ways. To provide options for graduates who prefer to enter the workforce, we are also working with our business and industry partners to arrange networking opportunities to assist students with securing employment after high school.

"Scientists study the world as it is; engineers create the world that has never been."
—Theodore von Karman, Hungarian-American mathematician, aerospace engineer, and physicist

"The ideal engineer is a composite...He is not a scientist, he is not a mathematician, he is not a sociologist or a writer; but he may use the knowledge and techniques of any or all of these disciplines in solving engineering problems."
—Nathan W. Dougherty, American civil engineer
Junior Year Course Schedule
- Engineering* – 4 periods
- Algebra 2 or Pre-Calculus or AP Calculus BC*
- AP Physics* or Regents Physics
- English 11
- Physical Education/Health
- US History

Senior Year Course Schedule
- Engineering* – 4 periods
- English
- Pre-Calculus or AP Calculus BC*
- AP Chemistry* or other Science elective
- Economics/Government
- Physical Education/Health

Fast Facts
- Engineering is the most-sought after major by employers.
- The word engineer comes from the Latin word meaning “cleverness.”
- Engineers are the second hardest position to fill.
- Only 11% of engineers are women.

STEM High School Student Profile
- “Credit ready” juniors
- Creative and curious students
- Problem solvers
- Individuals who want to make a difference
- Confident in math and science

More about the program...
- Students will learn the basics of Vex Robotics including design, programming, Virtual Robot World, testing and driving.
- Students will take NYS Regents History, English, and Algebra as needed. Math course placement will be determined based upon the student’s prior course history.
- Students will access online learning to supplement their academic classroom experiences using AccelerateU.
- Students may earn college credits. Please see our guidance counselor for details.

Sources: Business of Labor Statistics, Manpower Groups Talent Shortage Survey, Engineering.org, USNews, 2018

* School districts may weigh courses and grades following local policies and procedures.
Coordinate! Accessorize!
Dress up your career!

Here’s your chance to get an insider’s view of the fashion industry, from designing and creating your own clothes to buying and promoting fashion related products. Learn how to forecast fashion trends and find out what it takes to be a successful designer, buyer, visual merchandiser, or stylist. Visit the heart of Manhattan’s garment district and explore the many different “fashion avenues” that this exciting field has to offer!
COURSE TITLE: **FASHION MERCHANDISING AND DESIGN**

**COURSE DESCRIPTION**
This course provides skills and experience in retail operations, merchandising display and apparel design. Students cut, sew and design their own garments, demonstrate the forecasting of fashion, visually create a fashion display, illustrate sample garments for their portfolio, perform basic business procedures needed for any retail operation, and work cooperatively as a team member to run a successful retail store.

**COURSE CONTENT**

**APPLAIRE DESIGN**
Design Theory: Design Principles, Fashion History, Forecast Analysis, Figure Study, Illustration, Rendering/Presentation, Design
Individual Projects: Three or More Original Designs (casual, day wear, evening)
Fashion Production: Spring Fashion Showcase of Student Project Designs and Local Retailer/Boutique Selections

**RETAIL OPERATIONS**
Retail Store Organization: Merchandising, Finance and Control, Operations and Promotional Division Responsibilities
Customer Service: Profile/Market Segmentation, Merchandising Objectives, Service Policies, Sales Strategies, Inventory, Receipts Control
Spare Change: In-House Retail Boutique Providing Practical Exploration of Fashion Merchandising Curriculum

**VISUAL MERCHANDISING**
Display Design: Traffic Analysis, Market Impact, Calendar/Season, Theme, Composition, Floor Plans and Spec Rendering
Display Techniques: Realistic, European and Exaggerated (lay-down, pin-up, and flying)
Display Fixtures: Free Standing, Shadow Box, T-Walls, Structural Columns, Fascia, Display Counters, Platform, Shell Form, Risers and Build-ups
Planning: Schedule, Physical Requirements, Tools and Supplies, Lighting Equipment and Reference Materials

**EDUCATIONAL OPPORTUNITIES**
Advanced College Standing
Associate Degree in Marketing, Retail Business Management
Baccalaureate Degree

**CAREER OPPORTUNITIES**
Sales Associate
Management Trainee
Publicity Assistant
Fashion Coordinator
Display Designer
Fashion Designer
Pattern Maker
Visual Merchandiser
Buyer
Seamstress
Fashion Stylist
Fashion Teacher

**ADDITIONAL INFORMATION**
COSTS .................................................. Approximately $120 for supplies and materials
LENGTH OF COURSE .................................. 1 or 2 years
LOCATION ........................................... Gary D. Bixhorn Technical Center
CTE/ACADEMIC CREDIT .................. 1 year = 1 credit ELA and 1 credit General Ed – Art
                                      2 years = 1 credit ELA and 1 credit General Ed – Art
                                      (2 years = MAXIMUM 2 academic credits)
Fire & Ice!

Businesses, industries and homes all use the services of HVAC technicians. Train for any one of 17 career paths including cooling and heating, control systems and more. You will have an opportunity to earn national licensing and certification in refrigerant handling from the EPA as well as gas and oil heat servicing certifications from NATE and NORA. Students who qualify may participate in factory-sponsored training by a major HVAC local supplier. Qualifying students may also receive reduced tuition rates and 300 hours of training at a local college.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: **HEATING, VENTILATION AND AIR CONDITIONING (HVAC)**

**COURSE DESCRIPTION**
Our program includes the installation, service and repair of air conditioning, cooling, heat pump systems and electrical theory and service. An integral part of this program involves green technologies including geothermal and solar hot water heating, indoor air quality and HEPA filtration, as well as air sealing techniques. Students are prepared to take the EPA Certification Test for the handling of refrigerants.

Students have the option of taking the National Center for Construction Education Research (NCCER) exam and being placed on the NCCER National Registry. The Registry provides valuable industry credentials for students as they seek employment and build their careers.

**COURSE CONTENT**
- Residential Air Conditioning
- Marketing
- Cooling and Heat Pump Systems
- Controls, Circuits and Instruments
- Efficiency Rating
- Commercial Refrigeration
- Ice Machines
- Air Conditioning Systems
- Electrical Theory
- Indoor Air Quality
- Freezers and Freezing Systems
- Service Procedures and Troubleshooting
- Air and Duct Sealing
- Alternative Energy
- Energy Efficiency

**EDUCATIONAL OPPORTUNITIES**
- Advanced College Standing
- Two Year Technical College
- Associate Degree or Certificate

**CAREER OPPORTUNITIES**
- Service Technician
- Service Manager
- Installer’s Helper
- Parts Manager
- Small Business Owner/Operator
- Air Quality Control Specialist
- Heating and Air Conditioning Mechanic/Installer
- Manufacturer’s Representative
- Salesperson
- Labor Union Apprentice

**SUGGESTED SUPPORTIVE COURSES**
- Algebra, Science

**ADDITIONAL INFORMATION**
- RELATED COURSE: Plumbing and Heating
- COSTS: Tools and equipment $300
- LENGTH OF COURSE: 1 or 2 years
- LOCATIONS: Edward J. Milliken Technical Center, Harry B. Ward Technical Center
- CTE/ACADEMIC CREDIT: 1 year = 1 credit ELA or 1 credit science, 2 years = 1 credit ELA and 1 credit science, (2 years = MAXIMUM 2 academic credits)
- INDUSTRY CERTIFICATION: Environmental Protection Agency (EPA) Clean Air Section 608 Certification, National Center for Construction Education and Research (NCCER) National Registry, National Oil Heat Research Alliance (NORA), North American Technical Excellence (NATE)
A career in Law Enforcement is a great investment in job security.

Law enforcement offers expanding opportunities from high tech to criminal justice. In this program, you will test your skills while discovering where your interests lie. Explore the procedures police utilize when making arrests, how the criminal justice system works, and how to collect crime scene evidence. Earn the opportunity to participate in a one-week course at the Suffolk County Police Academy and experience life as a police recruit. Eligible students may attain New York State Security Guard certification.
COURSE TITLE: LAW ENFORCEMENT

COURSE DESCRIPTION
This is a broad based program for students with an interest in criminal justice, law enforcement, public safety and other related legal careers. The program includes the study of civil and criminal law providing a strong foundation for entry into the security field or for advanced training at a police academy or college. As a New York State Approved Security Guard school, students who qualify are provided an opportunity to pass the Security Guard certification exam, as well as the International Federation of Protection Officers (IFPO) exam and APCO exam, which is a national telecommunicator (911) certification. Both the IFPO and APCO certifications are nationally recognized and are offered in the second year of the program, which also includes forensics and crime scene investigations.

COURSE CONTENT – First Year
Intro to Criminal Justice
Intro to Law
Government Structure
Physical Security Systems
Computer and Computer Security
Patrol Techniques
Code of Conduct/Ethics
Emergency Planning
Community/Public Relations
Juvenile Justice System
Biohazards
Weapons Safety

COURSE CONTENT – Second Year
Court Systems
Introduction to Corrections
Risk Management Principles
Crime Scene Procedures
Investigative Techniques
Defensive Tactics
Substance Abuse
Homeland Security
911 Emergency Systems
Forensics
Internship

EDUCATIONAL OPPORTUNITIES
Associate and Baccalaureate Degrees

CAREER OPPORTUNITIES
Police Science
Police Officer
Police Dispatcher
Paralegal/Pre-Law
Sheriff’s Department
Probation Department
Child Protective Services
Corrections
Forensic Science
Court System
Security Officers
Fire Services
Corporate Security

ADDITIONAL INFORMATION
LENGTH OF COURSE..........................1 or 2 years
LOCATIONS .....................................Edward J. Milliken Technical Center
Gary D. Bixhorn Technical Center
Harry B. Ward Technical Center

CTE/ACADEMIC CREDIT ......................1 year = 1 credit ELA and .5 General Ed credit – Government
2 years = 1 credit ELA, 1 credit science, and
.5 General Ed credit – Government
(2 years = MAXIMUM 2.5 academic credits)

INDUSTRY CERTIFICATIONS..............International Federation of Protection Officers (IFPO) and Association of
Public Safety Communications Officials (APCO)
NYS Security Guard
Telecommunicator (911)
More horsepower to you!

Do boats, quads or motorcycles rev your engines? Consider becoming a marine or motorsports technician. In this booming field, technicians are needed in specialty shops, repair facilities and dealerships. Engine and vehicle systems theory, vehicle maintenance, performance modifications, as well as factory-supported training through Yamaha Motor Corporation are covered in this course. Dyno tune your motorcycle, quad or boat engine for maximum performance and beat the competition!

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: MARINE/MOTORSPORTS TECHNOLOGY

COURSE DESCRIPTION
Instruction will introduce and reinforce core knowledge in engine systems, drive systems, electrical and electronics systems, fuel systems, fabrication and engine machining. Students will learn how things are built, how they work and how to approach a repair. Students will have the opportunity to utilize our engine dynamometers to reinforce theory and prove performance modifications. Graduates will leave with the knowledge required to enter a broad array of the motorsports trades including automotive, marine, motorcycle and heavy equipment. Take advantage of our highly successful work study program and work in the industry with senior technicians while you’re still in high school.

COURSE CONTENT
Gasoline Engine Theory
Diesel Engine Theory
Troubleshooting
Cylinder Boring and Honing
Fuel Systems
Fuel Injection
Ignition Systems
Cooling Systems
Lubrication Systems
Electrical Systems
Charging Systems
Starting Systems
Valve Train Systems
Drive Systems
Fabrication
Welding/Machining
Shop Procedures
Equipment Maintenance
Shrink Wrap
Winterization Procedures

CAREER OPPORTUNITIES
Motorcycle Technician
Power Equipment Technician
ATV Technician
Fabricator
Machine Shop Assistant
Welder’s Assistant
Marine Technician

INDUSTRY SUPPORT
Yamaha Motor Corporation
Association of Marine Industries
New York Marine Trades Association

EDUCATIONAL OPPORTUNITIES
Graduates can immediately enroll in continual Yamaha training free of charge
Advanced College Standing
Two-year Technical college
Associate Degree

SUGGESTED SUPPORTIVE COURSES
Algebra

ADDITIONAL INFORMATION
COSTS............................................................Uniform and boots $75
LENGTH OF COURSE.................................1 or 2 years
LOCATION ..............................................Gary D. Bixhorn Technical Center
CTE/ACADEMIC CREDIT .........................1 Year = 1 credit ELA or 1 credit science
2 years = 1 credit ELA and 1 credit science
(2 years = MAXIMUM 2 academic credits)
INDUSTRY CERTIFICATIONS.....................Yamaha Outboard Systems
Snap On Multimeter Certification
EASTERN LONG ISLAND ACADEMY OF APPLIED TECHNOLOGY

NURSE ASSISTING

Nurse Assisting: be part of a healthy outlook!

Healthcare is the single largest growth industry in the nation. The need for kind, caring and compassionate individuals throughout the industry is enormous. Take your first step toward attaining New York State Nurse Aide certification while learning about the many opportunities available. Right now there are many very healthy reasons to choose a career in nurse assisting.

Advanced college/trade school credit is available to qualifying students from the following institution:
COURSE TITLE: **NURSE ASSISTING**

**COURSE DESCRIPTION**
This course is designed to prepare the student to be employed as a Nurse Assistant. Basic aspects of health care include procedures used in the care of patients such as: bathing, positioning, moving, transferring and monitoring vital signs. A hands-on approach with a laboratory component as well as practical applications of theory are emphasized. Clinical affiliations with various health care institutions further enhance this approach. This course is an entry level program in the field of nursing. This course prepares students for New York State Nurse Aide Certification. Students who successfully complete Nurse Assisting and Clinical Medical Assisting courses may be eligible for Patient Care Technician certification.

**COURSE CONTENT**
- Nutrition
- Basic Nursing Procedures
- Personal Health and Wellness
- Communication Skills
- Anatomy and Physiology
- Computer Applications
- Geriatric Care
- Promotion of Safety
- Vital Signs
- Medical Terminology
- Legal and Ethical Responsibilities
- Emergency Care
- Human Growth and Development
- Infection Control
- Health Care Systems
- Careers in Health
- Preparing for the World of Work
- Qualities of the Health Care Worker

**EDUCATIONAL OPPORTUNITIES**
- Practical Nurse (PN)
- Registered Nurse (RN)
- Associate and Baccalaureate Degrees
- Masters Degree

**CAREER OPPORTUNITIES**
- Nurse Assistant
- Rehabilitation Aide
- Recreation Assistant
- Skilled Nursing Facilities
- Home Care
- Hospice
- Hospital
- Sub-Acute Care

**SUGGESTED SUPPORTIVE COURSES**
- Algebra, Living Environment, Math
- Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 75% on the Algebra Regents and a minimum of 75% on the Living Environment Regents.

**ADDITIONAL INFORMATION**
- RELATED COURSES: Animal Science, Certified Personal Trainer, Clinical Medical Assisting, Dental Chairside Assisting, Physical Therapy Aide, Practical Nursing
- COSTS: Uniforms $70; workbook $35; complete physical examination required; New York State Nurse Aide certification testing fee $115, payable to New York State Commissioner of Health
- LENGTH OF COURSE: 1 year
- LOCATIONS: Edward J. Milliken Technical Center, Harry B. Ward Technical Center
- CTE/ACADEMIC CREDIT: 1 year = 1 credit ELA or 1 credit math or 1 credit science and .5 General Ed credit – Health (1 year = MAXIMUM 1.5 academic credits)
- INDUSTRY CERTIFICATION: New York State Nurse Aide
Physical therapy aides are responsible for assisting the Physical Therapist with a variety of tasks. Physical therapists work with patients to optimize mobility and help prevent and treat injuries and disabilities. A Physical Therapy Aide is responsible for ensuring that a patient’s visit with the therapist is productive and runs smoothly. Physical Therapy Aides are part of a growth industry with a robust job outlook over the next decade.

A healthy industry you can count on.
COURSE TITLE: **PHYSICAL THERAPY AIDE**

**COURSE DESCRIPTION**
Physical therapy is a growing part of the medical industry. Physical Therapy Aides are a crucial part of the rehabilitation team. They assist Physical Therapists in delivering quality care to patients. Responsibilities of the Physical Therapy Aide include transporting patients from one therapy area to another, preparing and organizing the location for the patient’s session, setting up any needed equipment, assisting with the patient’s evaluation for treatment session, and fulfilling office and clerical duties. Students will learn theoretical concepts, practice skills and experience first-hand therapeutic intervention for patients in a clinical setting.

**COURSE CONTENT**
- How to Treat Diverse Populations
- Anatomy and Physiology
- Medical Terminology
- Vital Signs
- Range-of-Motion Exercises
- Use of Canes, Crutches, Walkers, and other Assistive Devices
- Stair Training
- Hot Packs/Ice, Electrical Stimulation, Ultrasound and Kinesiology
- Strengthening Exercises
- Whirlpool Therapy–Use of Mechanical Lift
- Fitness, Nutrition and Weight Control
- Office Duties
- Sport-Specific Therapy to Return-to-Play

**EDUCATIONAL OPPORTUNITIES**
- Associate Degree
- Baccalaureate Degree
- Masters Degree
- Doctorate of Physical Therapy

**CAREER OPPORTUNITIES**
- Hospitals
- Physical Therapy Offices
- Schools for Children with Special Needs
- Home Health Care Agencies
- Nursing Homes

**SUGGESTED SUPPORTIVE COURSES**
- Living Environment
- Certified Personal Trainer, Clinical Medical Assisting, Dental Chairside Assisting, Nurse Assisting, Practical Nursing

**ADDITIONAL INFORMATION**
- RELATED COURSES
- COSTS
- Uniform $130; small fees for certifications in CPR, First Aid, AED, and blood borne pathogens may apply; complete physical exam required
- LENGTH OF COURSE
- 1 year
- LOCATION
- Gary D. Bixhorn Technical Center
- CTE/ACADEMIC CREDIT
- Pending
Plumbers, pipefitters, and steamfitters constitute one of the largest groups among the construction occupations. Approximately 55% work for independent contractors while others perform maintenance work for industrial, commercial, and government employers or are self-employed. Job opportunities are expected to be very good, especially for workers with welding experience, and salaries in this profession are among the highest in the construction trades. Students completing this program will earn a NYCOSH certificate of completion and may qualify to attain the NORA Bronze Certified Oilheat Technician credential upon successful completion of the exam.

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: **PLUMBING AND HEATING**

**COURSE DESCRIPTION**
This program is designed for students interested in installing, servicing and repairing of domestic sanitation systems, water heaters and home heating units. Students will also receive training on the latest trade-related green technology, as well as efficient appliances, retrofitting to increase water efficiency, and resource conservation. Along with the Plumbing and Heating curriculum, students will have an opportunity to take the National Center for Construction Education Research (NCCER) Academic Core Exam, be placed on NCCER’s National Registry and qualify for both Plumbing Level 1 and Core Certifications.

**COURSE CONTENT**
- Installation of boilers, tanks, burners, water heaters and controls, hot water and steam
- Servicing of burners, controls and heating systems
- Retrofitting with energy saving devices
- Efficiency testing and adjusting of heating systems
- Basic plumbing applications
- Planning work and developing material lists from sketches or building plans, isometric drawings and orthographic views
- Study of local and national plumbing codes and sanitary requirements
- Cutting, bending, threading and joining pipes according to specification
- Soldering, solvent welding of PVC and ABS plastic drainage piping, cast iron soil pipe, yarning and caulking no hub cast iron
- Hydrostatic testing of assembled systems
- Fixtures for domestic and commercial establishments
- Math applied to plumbing and heating (trade math)
- Installation of plumbing fixtures, drains, waste and vent lines

**EDUCATIONAL OPPORTUNITIES**
- Advanced College Standing
- Associate’s Degree or Certificate
- Baccalaureate Degree
- Two Year Technical College

**CAREER OPPORTUNITIES**
- Master Plumber
- Manufacturer Representative
- Industrial Maintenance Mechanic
- Utility Installer
- Water Conservationist
- Plumbing Supply Clerk
- Geothermal Technician
- Water Technician
- Water Resource Specialist
- Plumber’s Apprentice
- Pipe Fitter/Steam Fitter
- Oil Burner Technician

**SUGGESTED SUPPORTIVE COURSES**
- Algebra, Electricity, Technology

**ADDITIONAL INFORMATION**
- RELATED COURSES: Electrical Trade and Alternative Energy
  Heating, Ventilation and Air Conditioning (HVAC)
- COSTS: Work clothes $25; tools/equipment $200; safety shoes $50
- LENGTH OF COURSE: 2 years
- LOCATION: Gary D. Bixhorn Technical Center
- CTE/ACADEMIC CREDIT: 2 years = 1 credit ELA and 1 credit science
  (2 years = MAXIMUM 2 academic credits)
- INDUSTRY CERTIFICATIONS:
  - National Center for Construction Education and Research (NCCER) National Registry
  - National Oil Heat Research Alliance (NORA)
  - Safety Certification
  - North American Technical Excellence (NATE)
With people living longer and a “boomer” population that has come to expect high quality healthcare, nursing is one of the future’s most secure occupations. Besides a healthy job market, practical nurses enjoy personal rewards and a sense of self esteem. As a nurse, you will be responsible for the well-being of patients, teaching them how to achieve and maintain better health and brighter, more satisfying futures. In short, you will enhance the quality of human life. Secure career opportunities await you in hospitals and clinics, outpatient care centers, doctors’ offices, nursing facilities and in private home care.

Your helping hands will be doubly rewarded with the satisfaction of helping others coupled with the security of a promising future with unlimited opportunity!

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: PRACTICAL NURSING

All applicants must take and pass the nurse entrance exam: Test of Essential Academic Skills (TEAS) in the Spring of their junior year.

COURSE DESCRIPTION
This is a 17-month program (Level 1 and Level 2) that begins in the student’s senior year. During the first year of the program, Level 1 students learn theoretical nursing concepts and basic nursing skills built on the principles of biological, physical and social sciences. Level 1 provides classroom, laboratory and clinical experiences with an emphasis on safe care of the adult client at a health-related facility. Level 2 of the program, beginning in September following high school graduation, is designed to build upon previous nursing knowledge and related theory with a focus on evidence-informed nursing practices using critical thinking and the nursing process. Level 2 classes are held at the Adult Education Center in Brentwood and health-related facilities Monday through Friday 8:00 AM to 2:30 PM. Upon successful completion of 1,260 hours of instruction and program requirements, graduates are eligible to take the National Council Licensing Examination for Practical Nurses (NCLEX-PN).

COURSE CONTENT Level 1 – First Year
Fundamentals of Nursing – With Clinical Practice
Nutrition
Pharmacology
Growth and Development
Anatomy and Physiology
Introduction to Professional Nursing and Ethics

COURSE CONTENT Level 2 – Second Year
Clinical Practice and Theory:
Medical-Surgical Nursing
Psychiatric Nursing
Obstetrical Nursing
Gerontological Nursing
Pediatric Nursing

EDUCATIONAL OPPORTUNITIES
Advanced College Placement Available
Associate and Baccalaureate Degrees

CAREER OPPORTUNITIES
Hospitals/Hospices
Public Health Agencies
Physician’s Offices and Clinics
HMO
Travel Nursing
Nursing Homes
Private Homes
Armed Forces
Community-Based Care Centers
Skilled Nursing Facilities

SUGGESTED SUPPORTIVE COURSES
Algebra, Regents English, Living Environment, Nurse Assisting in 11th grade, or Clinical Medical Assisting in 11th grade.

Students enrolling in this program are expected to show proficiency in math and science by scoring a minimum of 80% on the Algebra Regents and a minimum of 80% on the Living Environment Regents.

ADDITIONAL INFORMATION
RELATED COURSES
.................. Clinical Medical Assisting, Dental Chairside Assisting, Nurse Assisting, Physical Therapy Aide

COSTS
.................. (Student/Parent Responsibility*)

Level 1 and Level 2:
Uniform .................. approximately $125
Books................. approximately $345 first year / $260 second year
Equipment ............. $200 first year
Background check..... approximately $52*
Random drug test..... approximately $35*

Level 1 only:
Complete physical examination**

LOCATION
.................. Gary D. Bixhorn Technical Center (Year 1)

CTE/ACADEMIC CREDIT
.................. 1 year = 1 credit ELA and 1 credit science and .5 General Ed credit – Health
(1 year = MAXIMUM 2.5 academic credits)

Upon completion of the second year, students are eligible to take the National Council Licensing Examination for Practical Nurses (NCLEX-PN). Tuition for Level 1 is paid by the local school district enrolling the student with the usual Academy aid. Tuition for Level 2 will be the responsibility of the student and/or parent. Level 2 students are eligible for Federal Student Loans and possible Pell Grants. Note: Students must maintain a 75% grade average per subject listed in the course content and maintain satisfactory attendance.

All students will be subject to random drug testing.

* Information to be provided.
** Please note: students/parents are responsible for costs of uniforms, books, supplies, and current physical exam as listed above.
Here's your chance to work in a creative studio setting while gaining valuable experience interacting with real clients. Experience the satisfaction of building a professional portfolio while completing your course requirements. Explore theory and concepts while learning how to use today’s software to fine tune and present your best work! Advanced standing of up to 9 college credits are available from participating colleges to students who qualify. Picture yourself in an exciting future as you take the first step toward becoming a professional photographer!

Advanced college/trade school credit is available to qualifying students from the following institution:
COURSE TITLE: PROFESSIONAL PHOTOGRAPHY AND DIGITAL IMAGING

COURSE DESCRIPTION
This course will focus on cultivating students’ styles, techniques, personal aesthetics, and personal growth using photographic imaging by enabling students to become critical thinkers using photography as a means of inquiry. Students will gain an understanding of photography from historical to recent criticism and understand its social implications. Both fine art photography and commercial photography (business side of photography industry) will be covered, with a strong emphasis placed on studio lighting, location lighting, black and white darkroom and developing, and digital imagery. Analog photography will serve as the foundation for understanding the photographic process, film cameras, and darkroom printing before moving to digital photography using a Macintosh platform and Adobe Photoshop® and Lightroom software. Problem solving, originality, and collaboration will be an integral part of in-class exercises, reading, assignments, presentations, critiques and independent projects.

COURSE CONTENT
Camera Techniques: Medium format film cameras and digital cameras
Lighting Techniques: The study of natural light, bounce, flash and portable lighting as well as studio lighting
Darkroom and Developing: How to process and make a print from film
Computer Software: Exposure to Adobe Photoshop® and Lightroom software, and processing digital imagery including scanning and retouching negatives into a final print image product
Portfolio Development: A student portfolio exemplifying the process of photography, from inception to completion, will be developed into a book layout that can be used for employment

EDUCATIONAL OPPORTUNITIES
Associate Degree
Baccalaureate Degree

CAREER OPPORTUNITIES
Studio or Photographer’s Assistant Advertising Photographer
News Photographer Industrial Photographer
Portrait Photographer Fashion Photographer
Photo Editor Wedding Photographer
Photo Stylist Fashion Stylist
Product Stylist Photo Lab Technician
Photo Equipment Sales Representative

SUGGESTED SUPPORTIVE COURSES
Algebra, Basic Art, Science

ADDITIONAL INFORMATION
RELATED COURSES Art, Design and Visual Communications, Television, Video and Digital Film Production
COSTS Incidental supplies and reference material $100
LENGTH OF COURSE 1 or 2 years
LOCATION Gary D. Bixhorn Technical Center
CTE/ACADEMIC CREDIT 1 year = 1 credit ELA
2 years = 1 credit ELA
(2 years = MAXIMUM 1 academic credit)
Be part of a growth industry with evolving technology and varied job opportunities. You will work both in front of and behind the camera, in studio and on location. This course emphasizes hands-on training, preparing you for the many career paths available in this field. Your creativity will soar as you work with professional cameras, lighting, and audio equipment and learn computer-based editing in a full studio setting. From commercials to music videos, and from TV journalism to short films, you can produce it all!

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: TELEVISION, VIDEO AND DIGITAL FILM PRODUCTION

COURSE DESCRIPTION
This course involves all phases of television production including planning, shooting and editing. Students will learn techniques in studio production, electronic journalism and digital filmmaking. Working in our 30’ x 40’ studio, students play an active role in the production of cable-ready talk and variety shows and promotional videos. In addition to working in the studio, students use professional cinema and field cameras, sound and lighting equipment to create their own news stories, public service announcements and short films and documentaries. This course offers valuable techniques and hands-on experience, which prepares students for an entry level position and/or advanced college placement. Internships are available.

COURSE CONTENT
Multi-Camera Studio Directing Video Switcher Operation Directing Talent
Master Control Master Control 3-D Animation
Camera Operation/Picture Composition Non-Linear Editing
Field and Studio Lighting 2-D Graphic Design
Audio Console Operation Scripting and Storyboarding
Microphone Use Location Production
Communication Law Basic Digital Film Production

EDUCATIONAL OPPORTUNITIES
Tech Prep
Advanced College Standing
Associate and Baccalaureate Degrees

CAREER OPPORTUNITIES
Technical Director Production Assistant
Camera Operator Writer
Lighting Director Graphic Artist
Floor Manager Talent
Audio Technician Maintenance Engineer
Video Operator Grip
CG Operator News Reporter
Graphic Editor Assignment Desk Editor
Gaffer Equipment Sales and Rental

ADDITIONAL INFORMATION
RELATED COURSES............................... Art, Design and Visual Communications, Audio Production, Professional Photography and Digital Imaging
COST.................................................. $20 for Incidental supplies
LENGTH OF COURSE.............................. 1 or 2 years
LOCATION.......................................... Gary D. Bixhorn Technical Center
CTE/ACADEMIC CREDIT ...................... 1 year = 1 credit ELA
.................................................. 2 years = 1 credit ELA
(2 years = MAXIMUM 1 academic credit)
Welders work in the manufacture of fabricated metal products, transportation equipment, machinery, and architectural and structural metals. Welders can also be found in automotive restoration and in custom motorcycle work. Experienced welders can advance to positions as technicians, supervisors, inspectors and instructors, or may open their own repair shops. Others, especially those who obtain a bachelor’s degree, may become welding engineers. Employment prospects are bright! Here’s your opportunity to obtain the entry-level skills you need to begin a career in welding.

Find your bright spot in heavy metal!

Advanced college/trade school credit is available to qualifying students from the following institutions:
COURSE TITLE: WELDING/METAL FABRICATION

COURSE DESCRIPTION
Entry level skills in electric ARC, TIG, MIG and Plasma ARC welding techniques are introduced. These techniques are developed in areas from heavy ferrous material to highly specialized light metals common to Long Island industry. Welding, according to specifications and blueprints, is emphasized.

Students have the option of taking the National Center for Construction Education Research (NCCER) exam and are placed on NCCER’s National Registry. The Registry provides valuable industry credentials for students as they seek employment and build their careers.

COURSE CONTENT

Aircraft and Industrial Welding
MIG and TIG (Heli-ARC) Theory and Practice
Thin Gauge Metal, Aircraft and Sheet Metal Fabrication
Brazing Light-Gauge Sheet Metal
Sheet Metal Fabrication
Blueprint Reading, Layout and Measurement
Plasma Arc Cutting and Resistance Spot-Welding
ARC Welding in Sheet and Plate Fabrication

Structural Steel and Construction Welding
Oxyacetylene Welding and Brazing (Maintenance Welding Techniques)
Shielded Metal ARC Welding (Stick Electrode) using AC and DC Welding Machines (Construction Welding, Equipment Repair)
Pipe Welding
MIG and TIG Welding (Heavy-Gauge Steel Construction Application)
Manual and Semi-Automatic Flame Cutting
Layout Work and Welding to Measurement, Job Design
Plasma Cutting Techniques

EDUCATIONAL OPPORTUNITIES
Advanced College Standing
Associate Degree
Trade Schools

CAREER OPPORTUNITIES
Machine Building
Aircraft Welder
Construction Welder
Pipeline Welder
Ship Building
Heavy Equipment Repair
Railroad and Transportation
Precision and Commercial Sheet Metal
Welding Technician
Welding Inspector
Welding Proprietor

SUGGESTED SUPPORTIVE COURSES
Algebra, Mechanical Drawing, Metal Shop

ADDITIONAL INFORMATION
COSTS........................................... Approved footwear and clothing $300
LENGTH OF COURSE.......................... 1 or 2 years
LOCATION........................................ Edward J. Milliken Technical Center
CTE/ACADEMIC CREDIT ..................... 1 year = 1 credit ELA
2 years = 1 credit ELA
(2 years = MAXIMUM 1 academic credit)

INDUSTRY CERTIFICATION .................. National Center for Construction Education and Research (NCCER)
National Registry
Co-op, Internship, Job Shadow

Through dynamic school/business partnerships, carefully designed and supervised work-based learning experiences assist students in honing technical proficiencies and polish professional skills, giving them the essential edge to successfully compete in today’s global and local workplace market.
**WORK-BASED LEARNING**

Students at The Academy can select from a wide array of school-to-career activities. Approved internships, job shadowing, apprenticeship preparation, clinical work experience and cooperative work experience provide students the opportunity to excel in their field of study.

**CAREER COUNSELING** services are provided through individual and group counseling that includes career decision-making, employability skills and personal adjustment. Communication with parents and district guidance counselors is also maintained. Additional guidance support services are provided to students with disabilities that have been mainstreamed into a program at The Academy.

**COOPERATIVE WORK EXPERIENCE** combines career and technical classroom study with paid productive work in a field related to the students’ academic and career goals. Cooperative work experience enhances a student’s technical, interpersonal and decision-making skills through a carefully designed and supervised training plan. Through a dynamic school-business partnership, cooperative work experience helps students develop the professional skills necessary to compete in today’s challenging workplace. It is also sometimes referred to as work study.

**JOB SHADOWING** is a structured, unpaid work-based learning experience which allows students to shadow an employee during a specific event/activity in order to gain a greater awareness of the scope of the job.

**INTERNSHIPS** are structured, unpaid work-based learning experiences which allow students to intern for a limited period of time. Interning affords the student the opportunity to concurrently explore a career field, develop skills and network with professionals in the industry.

**APPRENTICESHIPS** are highly structured training programs, usually sponsored by labor organizations or private industry. Many courses prepare students who are interested in pursuing a certified apprenticeship after graduation. Some apprenticeship programs offer advanced standing.

**SERVICE LEARNING** usually refers to community-based volunteer projects conducted in collaboration with local agencies or non-profit organizations.

**CUSTOMER SERVICE** provides a simulated work environment within the school setting and involves “live work”.

**CAREER-RELATED PARTNERSHIP ACTIVITIES** involve a collaborative relationship with a business/industry partner to provide students with work related experiences through mentoring, Junior Achievement and similar experiences.

**WORK-SITE TOURS** can provide students with an initial exposure to work-based learning through guided tours and presentations by business/industry representatives.

**SCHOOL-TO-CAREER TRANSITION** services are available to all students who require assistance to successfully bridge the transition from school to the world of work. The content includes such areas as finding employment, filling out job applications, completing resumes, interviewing skills, appropriate work related attitudes and internship opportunities.
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