# TABLE OF CONTENTS

CTE Centers ................................................... 2
CTE Facts ....................................................... 3
Integrated Academics and Early Entry CTE ................. 4
CTE Credits and Credentials .................................. 5
Animal Science ............................................ 6-7
Audio Visual Production .................................... 8-9
Automotive Technology .................................... 10-11
Carpentry and Construction Trades ......................... 12-13
Collision Repair and Auto Body Technology .............. 14-15
Cosmetology ............................................... 16-17
Criminal Justice .......................................... 18-19
Culinary Arts ............................................. 20-21
Early Childhood Education and Human Services .......... 22-23
Heavy Equipment Operations ............................. 24-25
Media Communications Technology ..................... 26-27
Medical Assisting ....................................... 28-29
Medical Professions .................................... 30-31
Natural Resources ...................................... 32-33
New Vision - Health Professions ........................ 34-35
Power Equipment Technology .......................... 36-37
Pre-Engineering and CADD ............................ 38-39
Product Design and Manufacturing .................... 40-41
Welding and Metal Fabrication ......................... 42-43
Enriching Learning with Nanotechnology ................ 44
CTE ADMINISTRATION

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Thomasine F. Graf
CTE Outreach Coordinator .................................................................................................................. 716-376-8225

Melissa Rivers
CTE / Workforce Development Community Learning Principal ......................................................... 716-376-8384

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Administrative Secretary .................................................................................................................... 716-376-8383

CTE CENTER AT BELMONT

5536 County Route 48, Belmont, NY 14813 .......................................................................................... 716-376-8322

Building Principal ......................................................................................................................... Kathleen Brisky, 716-376-8327
Secretary to Principal .................................................................................................................. TBD, 716-376-8326
Guidance Counselor .................................................................................................................... Jennifer Ricketts-Swales, 716-376-8358
Student Services & Work-Based Learning Coordinator ................................................................. Matthew Hopkins, 716-376-8328
CTE Secretary ...............................................................................................................................Mary Straight, 716-376-8322

CTE CENTER AT ELlicottville

5550 Route 242 E. Ellicottville, NY 14731 .......................................................................................... 716-376-8300

Building Principal ......................................................................................................................... Noel Sheehy, 716-376-8344
Secretary to Principal .................................................................................................................. Jackie Paddock, 716-376-8345
Guidance Counselor .................................................................................................................... Vincent Oliverio, 716-376-8343
Work-Based Learning Coordinator ................................................................................................. Terry Fuller, 716-376-8346
CTE Secretary ............................................................................................................................... Deanna Steffenhagen, 716-376-8300

CTE CENTER AT OLEAN

1825 Windfall Rd., Olean, NY 14760 .................................................................................................. 716-376-8410

Building Principal ......................................................................................................................... Stephen Dieteman, 716-376-8251
Secretary to Principal .................................................................................................................. Denise Bray, 716-376-8256
Guidance Counselor .................................................................................................................... Ashley Malpiedi, 716-376-8267
Work-Based Learning Coordinator ................................................................................................. Terry Fuller, 716-376-8740
Today’s cutting-edge, rigorous and relevant career and technical education (CTE) prepares youth and adults for high-wage, high-skill, high-demand careers in established and emerging industries. High school students involved in CTE are more engaged, graduate at higher rates and typically go on to postsecondary education.

▲ Taking one CTE class for every two academic classes minimizes the risk of students dropping out of high school.

▲ The average high school graduation rate for students concentrating in CTE programs is 93%, compared to an average national freshman graduation rate of 80%.

▲ 91% of high school graduates who earned 2-3 CTE credits enrolled in college.

▲ CA BOCES CTE programs offer 19 Certifications in 14 programs.

▲ Every program CTE program at CA BOCES has articulation agreements with local and regional colleges offering our students college credits.

▲ A 2015 NYS Education Dept. BOCES report card states that 89.53% of CA BOCES CTE graduates are either employed or are continuing their education.
DO I TAKE MATH, SCIENCE, AND ELA AT CTE?

...... YES!

High-quality CTE programs ensure that coursework is simultaneously aligned to rigorous academic standards and postsecondary expectations. CTE programs use applied, contextual learning to help students see the relevance of what they are learning and its connection to career opportunities and life goals. These programs also provide innovative options for supporting students with different learning styles.

CTE programs have a fundamental advantage because they are modeled closely after real careers students may one day enter. The students can readily demonstrate the answer to questions such as “How am I ever going to use this?” and “Why should I learn this?”. Reading, written communications, listening, speaking and mathematical reasoning (with problem solving) are embedded in careers.

Academic and CTE teachers work together to parallel their coursework and jointly teach cross-disciplinary projects that tackle real-world problems.

Examples of Integrated Academics:

▲ Science – Biology, Chemistry (some for college credit), and Physics concepts are learned and utilized in many of the CTE areas. Anatomy and Physiology are extensively covered as well. The students are using scanning electron microscope, AFM (Atomic Force Microscope) and nanotechnology concepts to discover more about their specific tech areas.

▲ Math – Algebra, Geometry, Trigonometry, Algebra 2, and Pre-calculus concepts, are taught and integrated into the lessons and hands on applications.

▲ ELA – The students use various technologies to create presentations, portfolios, and inventories. The students create a viable professional portfolio that includes a cover letter, resume, references, examples of their work-based learning experiences both in and out of the center. Students are also taught technical writing, customer communication skills, professional vocabulary, grammar and editing skills.

GETTING READY FOR THE WORLD
- EARLY ENTRY CTE

Early Entry CTE is designed to reinforce employability and academic skills. This program provides students the opportunity to develop the skills and work habits they will need to succeed in work and life after high school. This program supports the needs of students who are having difficulty connecting traditional academic instruction to practical application and process. Content is structured around CTE skills and activities, which are used to teach and reinforce CDOS and academic skills, including ELA, Math, Science, and Technology. This program focuses on preparing students for CTE programs or entry level employment. Students enrolled in Early Entry CTE will have the option to earn a .5 health credit along with a 1.0 math credit as determined by the District.
CTE CREDITS

CAREER AND TECHNICAL EDUCATION
CATTARAUGUS-ALLEGANY BOCES

Home school distribution of credits:

**Year 1**
- 2.0 Units Career & Technical Education
- 0.5 Units CTE Integrated/Specialized Math
- 0.5 Units CTE Integrated/Specialized Science
- 0.5 Units CTE Integrated ELA

**Year 2**
- 2.0 Units Career & Technical Education
- 0.5 Units CTE Integrated/Specialized Math
- 0.5 Units CTE Integrated/Specialized Science
- 0.5 Units CTE Integrated ELA

EARN A REGENTS DIPLOMA WITH A 4+1 CTE PATHWAY

Meet the minimum diploma requirement. Pass 4 required Regents exams, one in each discipline. Successfully complete a NYSED approved CTE Program which includes:
- ▲ 3 or more CTE credits
- ▲ Work based learning experience opportunity
- ▲ National technical assessment
- ▲ An employability profile

Meet or exceed the NYS cut score on both written and performance portion of the approved Pathway Assessment.

CTE technical assessments aligned with approved CTE programs of study are now considered as approved +1 Pathway Assessments and may be used as the fifth required exam toward graduation.

STUDENTS EXIT WITH A REGENTS DIPLOMA

EARN A CTE TECHNICAL ENDORSEMENT

Meet the minimum diploma requirement. Pass 5 required Regents exams or approved alternate (Pathway Assessments above). Successfully complete a NYSED approved CTE Program which includes:
- ▲ 3 or more CTE credits
- ▲ Work based learning experience opportunity
- ▲ National technical assessment
- ▲ An employability profile

Meet or exceed the NYS cut score on the written and performance portions of the approved program assessment. Successfully develop a portfolio, and complete a Work Based Learning Experience.

STUDENTS EXIT WITH A REGENTS DIPLOMA WITH TECHNICAL ENDORSEMENT
Animal Science is a rigorous two-year Career and Technical Education program designed to explore the diverse field of animal science. Students will recognize the important roles animals play in society from individual ownership to scientific research with far reaching implications. Animal Science students will acquire basic knowledge and skills necessary for further study or entry level positions in animal science and related fields. This technical course teaches specialized and advanced skills in areas such as veterinary assisting, care and handling of animals in a laboratory or veterinary setting, dog grooming, and kennel/pet shop management. Classroom opportunities include the development of animal handling skills and the study of animal behaviors through care and observation of animals housed in the classroom. This class also covers animal anatomy and physiology, care, behavior, breeding, body systems, genetics, training, and management of various animals. Course materials are enhanced with hands-on activities that include daily lab/clinic and field trips. Students are encouraged to participate in FFA and SkillsUSA activities and competitions that will enhance instruction and provide the opportunity to develop leadership skills.
WHERE IT CAN LEAD

△ PET GROOMER
△ VETERINARY ASSISTANT
△ VETERINARIAN
△ ANIMAL RESCUER
△ DAIRY FARM WORKER
△ STABLE WORKER
△ ZOO KEEPER
△ ANIMAL TRAINER
△ BIOLOGIST
△ WILDLIFE CONSERVATIONIST

WHAT YOU CAN EARN

△ New York State Technical Endorsement on High School Diploma

GO TO COLLEGE WITH CREDITS

△ Alfred State College
△ SUNY Cobleskill

WHERE IT IS HELD

△ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
  5536 County Route 48, Belmont, NY 14813 .................................................. 716-376-8326

△ CAREER AND TECHNICAL EDUCATION CENTER AT EL LICOTTVILLE
  5550 Route 242 E. Ellicottville, NY 14731-0690 ............................................. 716-376-8300

△ CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
  1825 Windfall Rd., Olean, NY 14760-9303 .............................................. 716-376-8200

THINGS YOU GET TO DO

△ In-house dog grooming salon open to community and run by students with instructor supervision
△ Breeding project
△ Visitations to veterinary clinics, SPCA, zoo, farms
△ Animal care and clinical duties
△ Alpaca Shearing
WHAT IT’S ABOUT

The goal of this program is to introduce students to the many aspects of the audio and visual mediums that are currently being used in music and audio applications and visual production. Our visual work focuses on photo framing and composition, cinematography techniques and 2D animation with green screen. In audio, we currently focus on music multi-track recording, effect process engineering and scoring for visual productions.

Students will gain a working understanding and practice a wide variety of applications associated with the audio and video industry standard software including Adobe Photoshop, Audition, Pro Tools, After Effects, Avid and Sony Acid programs.

Applications of software include: Creating music scores for all video productions, Multi-track music writing, performance and post mixing, Graphic layout and design of CD and DVD jackets and promotional flyers, 2D animation and green screen CG, Film making, including filming, editing and scoring, commercial production, broadcast journalism, and music videos.
WHERE IT CAN LEAD

- TELEVISION PRODUCER
- AUDIO PRODUCER
- WEB DESIGNER
- PHOTOGRAPHER
- NEWS PHOTOGRAPHER
- VIDEOGRAPHER
- DIRECTOR
- ON AIR TALENT

THINGS YOU GET TO DO

- Silent Film Festival
- Slam Poetry Reading with Video
- On Location Shooting of Video
- Use of Red Cinema Camera
- 2D Animation
- Lightwave Software
- Create a Yearbook

WHAT YOU CAN EARN

- New York State Technical Endorsement on High School Diploma

GO TO COLLEGE WITH CREDITS

- Art Institute of Pittsburgh
- Bryant & Stratton College
- Cayuga Community College

WHERE IT IS HELD

- CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
  1825 Windfall Rd., Olean, NY 14760-9303 ................................. 716-376-8200
WHAT IT’S ABOUT

This course, taught by ASE certified instructors, will prepare students for careers and further study in the changing field of automotive technology through hands-on project based learning experiences. The program goal is to prepare students for entry level automotive careers and further study in automotive maintenance and light repair. Options for further study include Automotive Technology/Mechanics, Motorsports, Parts and Service Technology, Motorcycle Technology, ATV and Diesel Mechanics. Students gain experience through a hands-on laboratory work space. Projects include oil changes, tires, brakes, exhaust systems, engine work, electrical repairs, and NYS inspections. Students have the opportunity to participate in SkillsUSA competitions as well as other competitions that are sponsored by car dealerships and car manufacturers. Some of these competitions may result in prizes of tools or scholarships.
WHERE IT CAN LEAD

▲ CAR DEALERSHIPS
▲ REPAIR SHOPS
▲ AUTO PARTS STORES
▲ QUICK LUBE BUSINESSES
▲ FLEET OPERATIONS

WHAT YOU CAN EARN

▲ New York State Technical Endorsement on High School Diploma
▲ ASE Certification
▲ OSHA Certification

THINGS YOU GET TO DO

▲ Trips to GM Tonawanda Engine Plant
▲ Buffalo Auto Show
▲ Cummins Engine Plant
▲ Ford – AAA Student Auto Skills Competition
▲ Niagara Falls Auto Dealers Competition at Erie Community College

WHERE IT IS HELD

▲ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
5536 County Route 48, Belmont, NY 14813 .................................................. 716-376-8326

▲ CAREER AND TECHNICAL EDUCATION CENTER AT ELICOTTVILLE
5550 Route 242 E. Ellicottville, NY 14731-0690 .................................................. 716-376-8300

▲ CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
1825 Windfall Rd., Olean, NY 14760-9303 .................................................. 716-376-8200

GO TO COLLEGE WITH CREDITS

▲ Alfred State College
▲ Erie Community College
▲ Ohio Technical College
▲ Pennsylvania College of Technology
▲ SUNY Morrisville
WHAT IT’S ABOUT

The Carpentry and Construction Trades course affords students the opportunity to experience the basics in a multitude of trade areas. The program provides students with classroom instruction and hands-on experiences in various aspects of the construction industry. Students learn the basics of construction, electrical wiring, masonry, carpentry, plumbing, heating. This two-year program provides students with basic knowledge of tools, methods, and materials used in carpentry and construction trades. Students can tailor the program around career interests, whether it be carpentry, construction, residential electrical, HVAC, or plumbing. Shop safety and a safe work environment are a fundamental part of the class. Students will spend time in the classroom and will go to job sites. Students who complete this course are prepared for entry level employment or further studies in carpentry/construction trades.
WHERE IT CAN LEAD

- Carpenter
- Electrician
- HVAC
- Mason
- Cabinet Maker
- Construction Laborer
- Construction Manager
- Code Enforcement Officer
- Plumber

WHAT YOU CAN EARN

- New York State Technical Endorsement on High School Diploma
- OSHA Certification
- CPR/First Aid Certification

THINGS YOU GET TO DO

- Learn in a hands-on environment
- Build projects and take them home
- Forklift training
- OSHA Certification
- Work outside of Classroom
  - Bocce Court for Community Organization
  - Sustainable Garden Project
  - Paver Project for Veterans Memorial
  - Shed Project Community Organization
  - Bench Project for Library
  - Porch Project for Residence
  - Picnic Tables for School District

GO TO COLLEGE WITH CREDITS

- Alfred State College
- Erie Community College
- Pennsylvania College of Technology
- Triangle Tech

WHERE IT IS HELD

- Career and Technical Education Center at Belmont
  5536 County Route 48, Belmont, NY 14813 .............................. 716-376-8326

- Career and Technical Education Center at Ellicottville
  5550 Route 242 E, Ellicottville, NY 14731-0690 .......................... 716-376-8300
Collision Repair/Auto Body covers all aspects of collision repair and finish work on vehicles. In the shop setting, students experience the methods of complete auto collision repair, working on damaged vehicles. They also learn several methods of custom design finish work and accurate estimating procedures. Our Collision Repair Shops are state-of-the-art and are evolving from solvent based paint to the latest environmentally friendly technology of low emission, water borne paint with down draft paint booths. Students learn automotive structure, become familiar with the tools used in collision repair, and master a variety of repair techniques. The class gives students a solid foundation, and the required certification, for entry level work in the collision field or for further study in this growing industry.
WHERE IT CAN LEAD

▲ Collision Repair Technician
▲ Insurance Adjuster
▲ Auto Glass Installer/ Repairer
▲ Auto Parts Salesperson
▲ New and Used Car Detailer
▲ Airbrush Specialist

WHAT YOU CAN EARN

▲ New York State Technical Endorsement on High School Diploma
▲ I-CAR Certification
▲ OSHA Certification

THINGS YOU GET TO DO

▲ Authentic repair practices by working on damaged vehicles
▲ Frame straightening and repair
▲ Refurbishing and refinishing multiple surfaces
▲ Demonstration from Airbrushing Artists

WHERE IT IS HELD

▲ Career and Technical Education Center at Belmont
  5536 County Route 48, Belmont, NY 14813 .................................................. 716-376-8326

▲ Career and Technical Education Center at Ellicottville
  5550 Route 242 E. Ellicottville, NY 14731-0690 ........................................... 716-376-8300

▲ Career and Technical Education Center at Olean
  1825 Windfall Rd., Olean, NY 14760-9303 .................................................. 716-376-8200

GO TO COLLEGE WITH CREDITS

▲ Alfred State College
▲ Erie Community College
▲ Ohio Technical College
▲ Pennsylvania College of Technology
▲ SUNY Morrisville
▲ Universal Technical Institute
WHAT IT’S ABOUT

The Cosmetology program is a 1000-hour hands-on introduction to the exciting and creative world of the beauty industry with an emphasis on professionalism and guidelines set forth by the New York State Division of Licensing. Students who successfully complete the program are eligible to take the New York State Board Exam to become a licensed Cosmetologist. The course is designed to prepare students to pass both the written and practical New York State Department of Licensing exam in Cosmetology, obtain the knowledge and skills needed for an entry level position within the beauty industry, or seek advanced training in the field. The program provides a curriculum which includes theory, practical, professional, ethical and health awareness. Students practice techniques in a supervised clinic which consists of a full service salon.
WHERE IT CAN LEAD

- Salon Owner
- Licensed Cosmetologist
- Nail Technician
- Esthetician
- Massage Therapist

WHAT YOU CAN EARN

- New York State Technical Endorsement on High School Diploma
- New York State Appearance Enhancement License

GO TO COLLEGE WITH CREDITS

- Alfred State College
- Bryant and Stratton College
- Continental School of Beauty

WHERE IT IS HELD

- **CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT**
  5536 County Route 48, Belmont, NY 14813 ............................................................... 716-376-8326

- **CAREER AND TECHNICAL EDUCATION CENTER AT ELLICOTTVILLE**
  5550 Route 242 E, Ellicottville, NY 14731-0690 .......................................................... 716-376-8300

- **CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN**
  1825 Windfall Rd., Olean, NY 14760-9303 .............................................................. 716-376-8200

THINGS YOU GET TO DO

- Trip to the Ellicottville Salt Cave Halotherapy Spa
- Tour local spas
- Perform hair and nail care at local businesses and organizations for public service
- Seniors run in-house salon
- Make-overs for Media Class Fashion Photography Shoot
- Manicure/Pedicure Contests
WHAT IT’S ABOUT

The Criminal Justice program prepares students for careers and further study in the field of Criminal Justice. The Criminal Justice System covers the fields of police, courts and corrections. Students will study law, both criminal and civil, including New York State Penal, Criminal Procedure, and Constitutional. Students will gain knowledge in many aspects of law and law enforcement through instruction and hands on activities. Students will develop a strong foundation of knowledge, as well as an understanding of the criminal justice system. Upon completion, students will be better prepared for continued studies in criminal justice, entry level law enforcement positions or military service.
WHERE IT CAN LEAD

△ SECURITY GUARD
△ POLICE OFFICER
△ ATTORNEY
△ PAROLE/PROBATION OFFICER
△ MILITARY MEMBER
△ DETECTIVE, PRIVATE INVESTIGATOR
△ CORRECTION OFFICER

THINGS YOU GET TO DO

△ Crime Scene Searches and Sketches
△ Traffic Stops
△ Field Sobriety
△ Mock Trials
△ COP Camp
△ National Guard Physical Training
△ Trips to local courts
△ Trips to regional prisons

WHAT YOU CAN EARN

△ New York State Technical Endorsement on High School Diploma
△ New York State Security Guard Certification
△ First Aid and CPR Certification

GO TO COLLEGE WITH CREDITS

△ Bryant and Stratton
△ Corning Community College
△ Erie Community College
△ Herkimer County Community College
△ Hilbert College
△ Jamestown Community College
△ Pittsburgh Technical Institute

WHERE IT IS HELD

△ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
   5536 County Route 48, Belmont, NY 14813 .................................................. 716-376-8326

△ CAREER AND TECHNICAL EDUCATION CENTER AT ELLICOTTVILLE
   5550 Route 242 E. Ellicottville, NY 14731-0690 ............................................... 716-376-8300

△ CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
   1825 Windfall Rd., Olean, NY 14760-9303 .................................................... 716-376-8200
WHAT IT’S ABOUT

Students in this course are actively involved in all areas of the restaurant industry using a state of the art kitchen/dining room facility. This is a very hands-on professional program. Experiences include plating, portioning and garnishing a variety of foods, meat preparation, standard restaurant-style preparation, daily safety, and sanitation inspection. Students will also learn planning, ordering, preparation to quality controls, service, and presentation. Students will prepare and serve high quality meals to faculty, students, and community groups. Students will also have banquet and catering experiences.
WHERE IT CAN LEAD

▲ FOOD & BEVERAGE DIRECTOR
▲ EXECUTIVE CHEF
▲ RESTAURANT MANAGER
▲ PASTRY CHEF
▲ SOUS CHEF
▲ BAR TENDER
▲ SERVER
▲ LINE COOK

THINGS YOU GET TO DO

▲ SkillsUSA Competitions
▲ International Food Presentation
▲ Pumpkin Carving
▲ Gingerbread House Creation
▲ Co-learn and teach with guest chefs and college students
▲ Cater BOCES events
▲ Operate window food service at school
▲ Food preparation for community events

WHAT YOU CAN EARN

▲ New York State Technical Endorsement on High School Diploma
▲ ServSafe Certification

GO TO COLLEGE WITH CREDITS

▲ Alfred State College
▲ Bryant & Stratton College
▲ Erie Community College
▲ Jamestown Business College
▲ Johnson & Wales University
▲ Lincoln Culinary Institute
▲ Paul Smith’s College
▲ SUNY Cobleskill
▲ Culinary Institute of America
▲ Niagara County Community College

WHERE IT IS HELD

▲ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
5536 County Route 48, Belmont, NY 14813 .......................................................... 716-376-8326

▲ CAREER AND TECHNICAL EDUCATION CENTER AT ELLICOTTVILLE
5550 Route 242 E. Ellicottville, NY 14731-0690 .................................................. 716-376-8300

▲ CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
1825 Windfall Rd., Olean, NY 14760-9303 ......................................................... 716-376-8200
WHAT IT’S ABOUT

In the Early Childhood program, students learn about the characteristics, needs, and behavior of young children. Students participate in a preschool learning lab at the CTE Center and/or at local district elementary schools. Internships and partnerships with home schools are ongoing throughout the second year. Classroom and lab work is rigorous, relevant to the career field, and prepares students for success in the post-secondary educational setting.

Upon completion of this program, students have the opportunity to leave with a Child Development Associate (CDA) Credentialed, as well as eleven credits toward education at JCC and other colleges and universities. This program offers students the foundation for introduction to teaching, as well as child development careers in child care, physical therapy, occupational therapy with a concentration in education.
WHERE IT CAN LEAD

▲ K-6 TEACHER
▲ CHILD CARE PROVIDER
▲ PRE-SCHOOL TEACHER
▲ PHYSICAL THERAPIST
▲ OCCUPATIONAL THERAPIST
▲ NANNY

WHAT YOU CAN EARN

▲ New York State Technical Endorsement on High School Diploma
▲ CDA Credential
▲ CPR/First Aid Certification

GO TO COLLEGE WITH CREDITS

▲ Corning Community College
▲ Erie Community College
▲ Jamestown Community College
▲ Pennsylvania College of Technology
▲ SUNY Cobleskill

THINGS YOU GET TO DO

▲ Conduct learning labs in local elementary schools and CTE Classroom
▲ Attend local elementary schools for practicum
▲ Visit Head Start program
▲ Trips to Pumpkinville, Sesame Street Live, Chuck E Cheese, Exotic Animal Farm

WHERE IT IS HELD

▲ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
5536 County Route 48, Belmont, NY 14813 ................................................................. 716-376-8326

▲ CAREER AND TECHNICAL EDUCATION CENTER AT ELLICOTTVILLE
5550 Route 242 E, Ellicottville, NY 14731-0690 .......................................................... 716-376-8300

▲ CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
1825 Windfall Rd., Olean, NY 14760-9303 ................................................................. 716-376-8200
HEAVY EQUIPMENT OPERATIONS

WHAT IT’S ABOUT

Heavy Equipment Operations will prepare students to operate a variety of equipment under the guidance of an experienced instructor. This two-year program will follow the NCCER (National Center for Construction Education and Research) curriculum as well as locally developed enhancements. The program provides instruction on the operation, general maintenance, and safety specific to the heavy equipment operations field. The two-year course will allow students to earn OSHA certifications as well as a NYSED technical endorsement. Students will experience lab time of approximately 1.5 hours per day. During lab time, students are engaged in hands-on learning activities with various forms of heavy equipment.
THINGS YOU GET TO DO

- Local 17 Operating Engineers presentation
- 811 Call Before You Dig class
- Forklift training
- Tractor trailer pre-licensing
- Bidding, surveying, and estimating
- Excavating Class

WHERE IT CAN LEAD

- Heavy and Tractor-Trailer Truck Drivers
- Material Moving Machine Operators
- Agriculture Worker
- Heavy Equipment Operator
- Gas & Pipeline Operators
- Gravel & Quarry Pit Operators

WHAT YOU CAN EARN

- New York State Technical Endorsement on High School Diploma
- OSHA Safety Certification

GO TO COLLEGE WITH CREDITS

- TBA

WHERE IT IS HELD

- Career and Technical Education Center at Ellicottville
  5550 Route 242 E. Ellicottville, NY 14731-0690
  716-376-8300
WHAT IT’S ABOUT

The Media Communications Technology program has been designed to give students the technical skills and hands-on experience they need to pursue a wide range of interests and opportunities in the digital design field. Students will learn to be designers in an ever-changing world.

Software to be covered includes Adobe Photoshop, Illustrator, InDesign, Lightroom, Premier, Audition, Muse, Fuse, After Effects and Animate. Media students will be prepared for exciting careers and studies in design, advertising, illustration, photography, video, and audio technology as well as web, animation, game design, and marketing. Students are required to create a professional portfolio showcasing their knowledge and experiences both in print and on the web.
WHERE IT CAN LEAD

- GRAPHIC DESIGNER
- ADVERTISING SPECIALIST
- ILLUSTRATOR
- PHOTOGRAPHER
- WEB DESIGNER
- VIDEOGRAPHER
- ANIMATOR
- GAME DEVELOPER/DESIGNER

WHAT YOU CAN EARN

- Multiple Adobe Certifications including
  - Adobe Photoshop
  - Adobe InDesign
  - Adobe Illustrator
  - Adobe Visual Design Specialist

GO TO COLLEGE WITH CREDITS

- Art Institute of Pittsburgh
- Bryant and Stratton College
- Erie Community College
- Hilbert College
- Jamestown Community College
- Pittsburgh Technical Institute
- SUNY Cobleskill
- Others college credits transfer with JCC

WHERE IT IS HELD

- Career and Technical Education Center at **BELMONT**
  5536 County Route 48, Belmont, NY 14813 ................................. 716-376-8326

- Career and Technical Education Center at **ELLIICOTTVILLE**
  5550 Route 242 E. Ellicottville, NY 14731-0690 .......................... 716-376-8300

- Career and Technical Education Center at **OLEAN**
  1825 Windfall Rd., Olean, NY 14760-9303 ............................... 716-376-8200

THINGS YOU GET TO DO

- Posters for community organizations
- Video production for county tourism
- Radio Commercials for Stop DWI & Anti-Smoking campaigns
- Portfolio Analysis and review with regional college representatives
- Logo Development for local business
- Brochure Designs for local, community organizations and festivals
The Medical Assisting program prepares students to be allied health professionals. Students will learn to perform routine clinical and administrative tasks that keep medical facilities running smoothly. Students will also learn interpersonal skills to work with medical personnel and patients. Students develop skills to put patients at ease, explain physician’s instructions, respect the confidential nature of medical information and perform all duties with a high level of professionalism. Students will participate in clinics throughout the two years, focusing on body systems, patient screenings and clinical assisting skills. Students will also participate in internships with medical facilities throughout their second year in the program.
WHERE IT CAN LEAD

- Medical, Dental or Surgical Assistants
- EKG Technician
- Licensed Practical Nurse (LPN)
- Phlebotomist
- Registered Nurse (RN)
- Lab Tech
- Certified Nursing Assistant
- Dental Hygienist
- Radiology Technician
- Certified Physical or Occupational Therapist
- Health Information Specialist/Coder

THINGS YOU GET TO DO

- Participate in Blood drives
- Volunteer for Special Olympics
- Engage in Hospice Activities
- Participate in Community Health Fairs
- Present at Career Days

WHAT YOU CAN EARN

- New York State Technical Endorsement on High School Diploma
- CPR Certification
- First Aid Certification
- National Medical Assistant Certification

GO TO COLLEGE WITH CREDITS

- Erie Community College
- Jamestown Community College
- Pittsburgh Technical Institute

WHERE IT IS HELD

- Career and Technical Education Center at Belmont
  5536 County Route 48, Belmont, NY 14813 ................................. 716-376-8326
- Career and Technical Education Center at Ellicottville
  5550 Route 242 E, Ellicottville, NY 14731-0690 ......................... 716-376-8300
WHAT IT’S ABOUT

The Medical Professions Program is a two-year program that prepares students for a career in health occupations, placing an emphasis on those requiring an associate’s degree or obtaining professional certification. Focal points of the program include the skills associated with Certified Nursing Assistant, Medical Assisting, Phlebotomy, EKG Technician, Medical Biller and Coder, and Pharmacy Technician.

The Medical Professions curriculum exposes students to an exciting variety of “in demand” health care careers. It provides theory, skills and real world experiences related to the role of the medical professional. This program will also provide the student with the confidence he/she will need to be successful in the health care field by enhancing their leadership, communication, and management skills.
WHERE IT CAN LEAD

- Registered Nurse (RN)
- Licensed Practical Nurse (LPN)
- EKG Technician
- Phlebotomist
- Medical Assistant
- Medical Biller/Coder
- Radiology Tech
- Lab Tech
- Medical Records Clerk
- Certified Nursing Assistant
- Physical Therapy Assistant
- Physical Therapist
- Certified Occupational Therapy Assistant

WHAT YOU CAN EARN

- New York State Technical Endorsement on High School Diploma
- CPR Certification
- First Aid Certification
- New York State Certified Nursing Assistant Certification

GO TO COLLEGE WITH CREDITS

- Erie Community College
- Jamestown Community College
- Pittsburgh Technical Institute

THINGS YOU GET TO DO

- Shadowing professionals at local hospitals, office settings and long-term care facilities
- Experience one-on-one patient encounters
- Teach younger students at area schools the importance of good health practices
- Participate in Blood Pressure Clinics

WHERE IT IS HELD

- Career and Technical Education Center at Olean
  1825 Windfall Rd., Olean, NY 14760-9303 ...........................................716-376-8200

- Erie Community College
- Jamestown Community College
- Pittsburgh Technical Institute
NATURAL RESOURCES

WHAT IT’S ABOUT

Natural Resources are the building blocks of society. Water, soil, wood and wildlife are the raw materials that we rely on throughout our lives. The Natural Resources program is concerned with the management and conservation of these natural resources.

Students should be able to perform manual labor with hand tools and heavy equipment. Most fieldwork is outdoors so the student should be willing and able to spend extended periods outside and dress for the weather. Natural Resource students work with dangerous equipment in an open environment and must exercise caution and responsibility. The program will introduce students to the fields of forestry, environmental science, surveying and heavy equipment operation. The program will also prepare students for college or employment in related fields and develop a safe and cooperative work ethic.
WHERE IT CAN LEAD

- ENVIRONMENTAL SCIENTIST
- FORESTER
- SURVEY TECHNICIAN
- HEAVY EQUIPMENT OPERATOR

THINGS YOU GET TO DO

- Logging and Firewood Production
- Road and Trail Maintenance
- Earth Moving
- Property Surveying
- Maple Syrup Production
- Water Quality Management
- Tree Planting and Care
- Wildlife Management
- Lumber Grading

WHAT YOU CAN EARN

- New York State Technical Endorsement on High School Diploma
- OSHA 10 Hour Construction Industry Certification
- NYLT (New York Logger Training) Certification

GO TO COLLEGE WITH CREDITS

- Alfred State College
- Bryant and Stratton
- Paul Smith’s College
- Pennsylvania College of Technology

WHERE IT IS HELD

- CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
  5536 County Route 48, Belmont, NY 14813 ..................................................... 716-376-8326

- CAREER AND TECHNICAL EDUCATION CENTER AT ELLICOTTVILLE
  5550 Route 242 E. Ellicottville, NY 14731-0690 ..................................................... 716-376-8300
WHAT IT’S ABOUT

A one-year, senior-level, highly academic program that allows students to explore the health care field while gaining high school and college credits. The program provides students the opportunity to learn basic medical concepts, exposure to many medical careers and settings, and familiarize students with anatomy and physiology of the human body at both the microscopic and macroscopic levels. The program also provides accumulation of up to 150 clinical hours in local hospitals/health care facilities.

Students will learn the basic principles of Medical Terminology - medical word building, pronunciation and use of medical terms. This program will develop critical thinking and writing skills through various projects and research papers. Students will also be able to develop into informed citizens through course work in Economics and Participation in Government.
WHERE IT CAN LEAD

- DENTIST
- MEDICAL LAB TECHNOLOGIST
- OPHTHALMOLOGIST
- PHARMACIST
- PHYSICAL THERAPIST
- PHYSICIAN
- PHYSICIAN ASSISTANT
- REGISTERED NURSE
- SPEECH THERAPIST
- ULTRASOUND TECHNOLOGIST

WHAT YOU CAN EARN

- CPR/AED Certification
- First Aid Certification

THINGS YOU GET TO DO

- Diet analysis studied through a nutrition project
- Dissection of owl pellets and lab specimens
- Conduct experiments in lab at JCC
- Values, ethics, diversity and perspectives project
- Participate in a Mock Tribunal
- College Visits and Field Trips

WHERE IT IS HELD

- CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
  5536 County Route 48, Belmont, NY 14813 ................................. 716-376-8326

- CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
  1825 Windfall Rd, Olean, NY 14760-9303 ........................................... 716-376-8200

GO TO COLLEGE WITH CREDITS

- 17 College Credits from Jamestown Community College
Power Equipment Technology combines the challenge of solving a mechanical problem and making a piece of power equipment perform. In this two-year program, students learn about the basic internal combustion engine theory (both gas and diesel), as well as gain practical experience with heavy equipment operation, preventative maintenance, reconditioning, and troubleshooting. Farm machinery and small engine repair are also covered. PET is designed to provide students with a basic set of mechanical skills. This skill set will allow students to branch out into many different mechanical career fields including: Power Sports, Small Engine / Consumer Products Service, Agricultural/Construction/Truck Repair, Welding/Metal Fabrication and Heavy Equipment Operation.
WHERE IT CAN LEAD

▲ AGRICULTURAL EQUIPMENT TECHNICIAN
▲ CONSTRUCTION EQUIPMENT TECHNICIAN
▲ OUTDOOR POWER EQUIPMENT TECHNICIAN
▲ POWERSPORT TECHNICIAN
▲ HEAVY EQUIPMENT OPERATOR
▲ HEAVY TRUCK REPAIR TECHNICIAN

THINGS YOU GET TO DO

▲ Change ignition system, rebuild the charging, starting and fuel systems on 1939 Ford Firetruck
▲ Re-build the cylinder head on a Massey-Ferguson #285 Farm Tractor
▲ Perform a fuel system repair on snow blower for community organization

WHAT YOU CAN EARN

▲ New York State Technical Endorsement on High School Diploma
▲ OSHA Safety Certification

GO TO COLLEGE WITH CREDITS

▲ Alfred State College
▲ Ohio Technical College
▲ Pennsylvania College of Technology
▲ SUNY Cobleskill

WHERE IT IS HELD

▲ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
  5536 County Route 48, Belmont, NY 14813 .......................................................... 716-376-8326

▲ CAREER AND TECHNICAL EDUCATION CENTER AT ELICOTTVILLE
  5550 Route 242 E. Ellicottville, NY 14731-0690 .................................................. 716-376-8300
WHAT IT’S ABOUT

This structured, yet flexible high school program offers students in-depth, hands-on knowledge of engineering and technology-based careers. The three-tiered approach to learning flows from foundation courses, to specialization courses, to a capstone course. Students will learn engineering design and explore technology systems and manufacturing processes. Logical thought processes are built through “Activity based Project based Problem based” (APPB) learning experiences in the program. Students will formulate solutions to open-ended engineering questions. Prepares students for careers and further study in design, engineering, and related fields.
WHERE IT CAN LEAD

△ COMPUTER AIDED DRAFTER
△ ENGINEERING TECHNICIAN
△ ENGINEER—MECHANICAL
△ INDUSTRIAL/PROCESS
△ ELECTRICAL
△ CIVIL

THINGS YOU GET TO DO

△ Create and analyze models using specialized computer software.
△ Construct and test electronic circuitry for functionality.
△ Apply principles of robotics and automation to the creation of models of three-dimensional designs

WHAT YOU CAN EARN

△ New York State Technical Endorsement on High School Diploma

GO TO COLLEGE WITH CREDITS

△ Alfred State College
△ Art Institute of Pittsburgh
△ Bryant and Stratton College
△ Erie Community College
△ Pennsylvania College of Technology
△ Pittsburgh Technical Institute
△ Rochester Institute of Technology
△ SUNY Delhi
△ Triangle Technical Institute

WHERE IT IS HELD

△ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
5536 County Route 48, Belmont, NY 14813 .......................................................... 716-376-8326
WHAT IT’S ABOUT

This structured, yet flexible program offers students in-depth, hands-on knowledge of engineering and advanced manufacturing technology based careers. The three-tiered approach to learning flows from foundation courses to specialized courses. Logical thought processes and technical skills are built through “Activity/Project/Problem Based” (APPB) learning experiences in the program. Students learn introduction to design, principles of engineering, computer integrated manufacturing, design and development, and advanced manufacturing.

This program is open to all Junior and Senior students. Students can pursue a Junior/Senior option, dual credit/articulated credits and a technical endorsement on their High School Regents Diploma. Students can also pursue a Senior only option, leading to dual/articulated credit.
WHERE IT CAN LEAD

▲ MECHANICAL ENGINEER
▲ ENGINEERING TECHNICIAN
▲ CAD DRAFTER
▲ PROTOTYPE MACHINIST
▲ CNC OPERATOR
▲ CNC PROGRAMMER
▲ PRODUCTION MACHINIST

WHAT YOU CAN EARN

▲ New York State Technical Endorsement on High School Diploma
▲ OSHA Certification
▲ Autodesk Certification

GO TO COLLEGE WITH CREDITS

▲ Alfred State College
▲ Art Institute of Pittsburgh
▲ Bryant and Stratton College
▲ Erie Community College
▲ Pennsylvania College of Technology
▲ Pittsburgh Technical Institute
▲ SUNY Delhi
▲ Triangle Technical Institute

THINGS YOU GET TO DO

▲ Design and manufacture golf putters
▲ Machine parts for iphone speaker
▲ Create mountain boards
▲ Design and create drones
▲ Build guitars

WHERE IT IS HELD

▲ CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN

1825 Windfall Rd., Olean, NY 14760-9303 ........................................716-376-8200

1825 Windfall Rd., Olean, NY 14760-9303 ........................................716-376-8200
WELDING AND METAL FABRICATION

WHAT IT’S ABOUT

Welding and Metal Fabrication is a two-year program to prepare students for entry-level positions, apprenticeships, and college level training programs. Students learn and work in a professional environment to develop real world employee skills for success in future training and employment. Students who succeed in this program will have a broad base of skills related to the metalworking, manufacturing, and construction industries. Students will learn specific skills using the latest technology in welding and fabrication including SMAW, GMAW, FCAW, GTAW, OFC, PAC, as well as Shearing, Punching, Forming, Sawing, Grinding, and Drilling.

Topics covered include safety, layout skills, welded joint design, blue print reading, metal fabrication, metallurgy, testing, and inspection of welds.
THINGS YOU GET TO DO

▲ Compete in a Weld-Off at Niagara Orleans CTE Center
▲ Redesign a new chasse for a hot rod
▲ Design and create hoist for Buffalo Maritime Center
▲ Build truck bed for BOCES maintenance sander truck
▲ Outdoor sculpture project
▲ Build weld trailer for welding rig

WHAT YOU CAN EARN

▲ New York State Technical Endorsement on High School Diploma
▲ American Welding Society Entry Level I Certification
▲ OSHA Certification

GO TO COLLEGE WITH CREDITS

▲ Alfred State College
▲ Jamestown Community College
▲ Ohio Technical College
▲ Pennsylvania College of Technology
▲ Triangle Tech

WHERE IT CAN LEAD

▲ PLUMBER, PIPEFITTER OR STEAMFITTER
▲ STRUCTURAL WORKER
▲ WELDER, CUTTER, SOLDERER AND BRAZER
▲ SHEET-METAL WORKERS
▲ WELDER, CUTTER, SOLDERER AND BRAZER AIDE
▲ BOILERMAKER
▲ STRUCTURAL METAL FABRICATOR AND FITTER
▲ WELDING TECHNICIAN
▲ MATERIALS ENGINEER/WELDING ENGINEER
▲ WELDING INSPECTOR
▲ WELDING SALES REPRESENTATIVE

WHERE IT IS HELD

▲ CAREER AND TECHNICAL EDUCATION CENTER AT BELMONT
5536 County Route 48, Belmont, NY 14813 716-376-8326
▲ CAREER AND TECHNICAL EDUCATION CENTER AT ELLICOTTVILLE
5550 Route 242 E. Ellicottville, NY 14731-0690 716-376-8300
▲ CAREER AND TECHNICAL EDUCATION CENTER AT OLEAN
1825 Windfall Rd., Olean, NY 14760-9303 716-376-8200
**Integrated science using Nanotechnology**

Nanotechnology focuses on the characterization, fabrication, and manipulation of biological and nonbiological structures on the scale of 1-100 nanometers in size. Encompassing nanotechnology is nanoscale, nanoengineering and technology, as well as physics, chemistry, and biological sciences.

All CTE students will gain an understanding of the role nanoproducts play and be able to identify nanoproducts already in use. They will understand the importance of material science and engineering in the development of new products and the career path to jobs in the nanotechnology field.

Students will have the opportunity to operate the JEOL 6010LA Scanning Electron Microscope (SEM), the Phenom ProX SEM, or Bruker Dimension Edge Atomic Force Microscope (AFM) and use it to image, analyze, and manipulate materials at the nanoscale. They will also learn about sample preparation using a Cressington 108 Manual Sputter Coater.

**Component school use of the SEM**

- Host teacher training workshops to introduce Nanotechnology.
- Host component school science classes and introduce students to the world of Nanotechnology.
- Schedule and prepare samples for remote sessions.

**Introduction to Nanotechnology (Nano 101) - Online**

Nanotechnology is a rapidly growing field of STEM that embraces concepts from biology, chemistry, engineering, mathematics, and physics. It encompasses the manipulation of very small materials, called “nanomaterials”.

Course goals included providing students with sufficient scientific and engineering knowledge necessary to understand:

- The differences between nano and bulk scale.
- How to choose or design nanomaterials with desired properties for particular applications.
- Using particular properties to invent products or solve problems.
Notice of Non-Discrimination

The Cattaraugus-Allegany-Erie-Wyoming Board of Cooperative Educational Services does not discriminate on the basis of an individual's actual or perceived race, color, religion, creed, ethnicity, national origin, citizenship; status, age, marital status, partnership status, disability, predisposing genetic characteristics, sexual orientation, gender (sex), military status, veteran status, domestic violence victim status or political identity, gender expression, and religious practices or any other basis prohibited by New York State and/or federal non-discrimination laws in employment or its programs and activities. The District provides equal access to community and youth organizations.

Inquiries regarding the District’s non-discrimination policies should be directed to: Civil Rights Compliance Officer, Human Resources, Cattaraugus-Allegany BOCES, 1825 Windfall Road, Olean, NY 14760, 716-376-8337. Email: CivilRightsCompliance@caboces.org