

Career and Technical Education

Programs • Erie 1 BOCES • Potter, Harkness, Calspan and Kenton

A student whose absence from scheduled instruction exceeds 10% of the possible days of attendance may not be eligible to attend the BOCES program. Three tardies will constitute an absence. Students requesting a program at the Potter, Harkness, Calspan or Kenton Career Centers will be required to attend an orientation and meeting with a parent/guardian.

*Please note that students may be responsible for purchasing supplies/equipment for various programs.

Animal Science I and II (HKP)

3.75 credits per year- 2 year program

Animal Science exposes students to careers in the veterinary and animal management fields. This program teaches basic and advanced skills in nutrition, health and disease, animal handling and restraint, grooming, pet first aid, and medical terminology.

3.75 credits per year- 2 year program

Students will not only produce baked goods in both large and small quantities, but understand the science behind them. Students will create beautiful show pieces, plated desserts, chocolates and individual pastries in extensive hand-on classes. This program is certified by the American Culinary Federation (ACF).

Auto Technician Training I and II (HKP)

3.75 credits per year- 2 year program

This program is certified through the National Automotive Technician Education Foundation (NATEF). It provides an excellent foundation for students looking to enter an automotive college program or the entry-level workforce. Students are trained on the latest technical equipment by instructors that are Automotive Service Excellence (ASE) certified. Students who successfully complete this program will be eligible to sit for the ASE student certification in Auto Maintenance and Light Repair. Passing this exam will qualify for a Pathway graduation option

Barbering I and II (H,K)

3.75 credits per year- 2 year program

Leave your mark on the ever changing world of fashion and beauty. Prepare for the NYS Master Barber's licensing exam. Cut, color, and style male and female clients. Learn to communicate effectively with clients and colleagues.

Building Trades I and II (HKP)

3.75 credits per year- 2 year program

This program offers instruction in carpentry and associated trade areas. Students participate in construction modules of introduction to carpentry, foundation and floor framing, wall framing, ceiling and roof framing, interior and exterior finish, cabinet making and remodeling with an introduction to masonry, plumbing and electrical systems. Practical experience through a variety of in shop projects plus internship opportunities with regional contractors and businesses are provided to all students.

Aviation Technology I and II (Harkness)

3.75 credits per year- 2 year program

Experience flight by hands-on operation of a Piper Warrior and take off with a licensed pilot as your teacher. Experience maintenance procedures with the aircraft in class. Create, develop and test modifications to aircraft designs in an engineering exploration style.

Baking and Pastry Arts I and II (HKP)

Collision Repair I and II (Harkness)

3.75 credits per year 2 year program

The first 10 weeks of this program will consist of a core introduction to the automotive industry. Students will then specialize in collision repair for the remainder of the program. The program will cover the total process of auto body restoration: metal straightening, glass and panel replacement, fiberglass repair and all painting preparation and finishing techniques. Students will also perform repairs on donated vehicles, their own family vehicles, and participate in an internship at a local automotive collision repair facility. This program aligns with iCar curriculum and standards. Students will work towards iCar industry certifications in “Non-Structural Technician” and “Refinish Technician” and will qualify for a graduation pathway.

Cosmetology I and II (HKP)

3.75 credits per year- 2 year program

This two-year program prepares students to work in the salon industry. During the active Customer Care Clinic, students put their skills into action by working on actual clients from the community. Local salon owners regularly visit classrooms to share the latest trends in cutting, coloring, and styling. In the second year, students participate in internships by working in the salon of their choice. Upon graduation, Erie 1 BOCES will assist students in completing the 1,000 instructional hours required to obtain a cosmetology license in NYS.

Criminal Justice I and II (HKP)

3.75 credits per year- 2 year program

Criminal Justice students explore the major areas of the field including law enforcement, courts, corrections, investigations and forensics, homeland security and private security.

Culinary Arts I and II (HKP)

3.75 credit per year- 2 year program

Culinary arts bring new tastes and worldly adventures to the class everyday. Students will spend their days preparing and serving meals. This program is certified by the American Culinary Federation (ACF). Graduates receive a certificate that they attended an American Culinary Federation Accredited (ACF) Program and a Certified Fundamentals Cook (CFC) designation.

Cybersecurity and Networking I and II (Harkness)

3.75 credits per year- 2 year program

Use the latest software to analyze data traffic on a network. Design computer networks and program routers and switches. Learn to troubleshoot PC hardware and operating systems. Get industry standard Network+ and Cisco CCNA certifications while still in high school.

Dental Laboratory Technology I and II (Harkness)

3.75 credits per year- 2 year program

Dental laboratory technology is the art and science of the fabrication of corrective devices and replacements for natural teeth. The course covers five specialties of dental laboratory technology: complete denture, partial denture, crown and bridge restoration, porcelain and ceramics and orthodontics.

Early Childhood Education I and II (HKP)

3.75 credits per year- 2 year program

Work side-by-side with a certified teacher in a daycare or elementary classroom. Create and teach your own lessons in a preschool program run right out of the Harkness school.

Electrical Systems I and II (HKP)

3.75 credits per year- 2 year program

This course deals with the application of electrical technologies in all phases of the electrical industry. It prepares students for the planning, installation, maintenance and troubleshooting of wiring systems in residential and light industrial settings according to the standards of the National Electrical Code. Instruction in principles of electricity, reading of blueprints and wiring diagrams, and renewable technologies. Installation of solar and wind technology is emphasized.

Electronics and Applied Technology I and II (Harkness)

3.75 credits per year- 2 year program
Students will use soldering irons, hand tools, meters, and oscilloscopes to build computers, robots, amplifiers, wireless devices, and other high tech projects. Topics of study include: microcomputer systems, amplification, digital electronics, soldering, desoldering, and PCB repair. Students will understand semiconductor, DC, and AC electronics, analog/digital conversion, telephone and cellular communications, and radio communications.

Emergency Medical and Fire Services I and II (Kenton)

3.75 credits per year- 2 year program
Students will explore the wide variety of career opportunities available in Emergency and Fire Services and practice hands-on emergency care skills like patient assessment, treatment, team communication, and patient transportation. Topics of study include: anatomy and physiology, medical terminology, diseases and disorders, and basic medical abbreviations. Students will understand emergency and administration, primary and secondary assessment, weight conversions, concentration calculations, trauma intervention and special considerations, special patient populations, and EMS operations.

Engineering and Robotics I and II (Harkness)

3.75 credits per year- 2 year program

Learn how to build a trebuchet, help us to develop the technology necessary to create a 3D printed "bobblehead", or create 3D printable parts and artwork from black and white pictures. WE build a variety of robots for competition within the classroom, at Tech Wars, and for First Robotics, held annually at RIT.

Esports Management and Game Development (Calspan)

3.75 credits per year - 2 year program
Students will explore the growing world of Esports and learn the business components of this booming industry. Topics of study include: computer literacy, game industry fundamentals, narrative design, principles and elements of design, game audio components, broadcasting and streaming, logo and brand design, game theory and strategy, and marketing strategies.

Exercise Science I and II (PK)

3.75 credits per year- 2 year program
Students will explore the effects of exercise including cardio-conditioning, strength and flexibility training on human health, wellness and sports performance. Topics of study include: fitness safety, functional movement and screening, health fitness trends, human anatomy and physiology, nutrition and weight management, specialty program design, cardiovascular and resistance training program design, sport specific training and the business of fitness. Students will design, implement and update personal training programs based on client specific goals. Students will also investigate and on various career paths in the healthcare industry.

Fashion Design Technology I and II (PH)

3.75 credits per year 2 Year Program

Experience what it's like to produce a "NYC Fashion Week" show. Learn to dress, style and create trends based on design elements and the fashion cycle. Create a successful business plan for a fashion boutique combining your design aesthetics with merchandising concepts.

Health Careers and Health Careers II (Intro to Nursing) (HKP)

3.75 credits per year- 2 year program

This program is designed to help students explore and deepen their knowledge of careers in health care so that they can make informed college and career choices. Students learn the importance of health and wellness promotion as an integral element of any health related career. The study of medical terminology and the human body in health and disease and insight for the student pursuing any medical/health career. The core curriculum provides basic skills, knowledge and attitudes common to present and emerging health careers. Units of study in the first year of this program form the basic foundation for more specialized study in basic nursing skills for the 2nd year.

HVAC I & II (HP)

3.75 credits per year- 2 year program

Students will gain an understanding of the fundamentals of residential and light commercial heating, ventilation and air conditioning installation, service, and repair. Topics of study include: potable water systems, forced air heating systems, steam and hydronic heating systems, drainage, waste and vents, and central air conditioning systems. Students will practice soldering, brazing, blueprint interpretation and isometric drawing analysis. Students will earn trade related certifications like OSHA 10 and EPA 608.

Plumbing I and II (Harkness)

3.75 credits per year - 2 year program

Students will learn how to cut and install various types of materials that are used within the field. Topics of study include: plumbing and professional safety, blueprint reading, fixture assembly, codes, pressure, temperature and water heaters, and water supply systems, mains, and wells.

Social Media Marketing (Calspan)

3.75 credits- 1 year program (Seniors)

Students will learn the variety of social media platforms available to businesses, learn how to build a company's brand, increase sales in e-commerce spaces, and drive website traffic. Students will explore ways to engage existing customers, reach new ones and analyze analytics and demographic information that allow marketers to track the success of their effort and identify more ways to engage.

Video Production and Recording Arts I and II (Calspan)

3.75 credits per year 2 year program

Learn to create and produce your own original films and music. The video and recording industry is always changing and a VPA student will have the opportunity to gain experience with cutting edge technology and network with industry professionals.

Virtual Production and Design I and II (Calspan)

3.75 credits per year- 2 year program

Students will experience real world skills and techniques in the fields of graphic design, animation, illustration, and virtual production. The 2 year program studies topics like digital photography and videography, 2D and 3D animation and compositing, visual effects, combining virtual and physical worlds. They will create dynamic content through cutting edge, modern technology and techniques taught by industry professionals as well as gain real world experiences with today's top producers and creative professionals.

Web Technologies & Game Programming I and II (Calspan)

3.75 credits per year- 2 year program

Web Technologies and Game Programming is a fun and creative program that teaches students of all skill levels how to create dynamic Web sites. The foundations of programming are also covered as students learn how to plan the logic of game design.

Welding I and II (KP)

3.75 credits per year- 2 year program

There is great opportunity for employment due to the large shortage of welders in the United States. Instruction is given in methods of measurement, layout, equipment setup and operation. Students will become familiar with the tools and equipment of the metal fabrication industry including: blueprint reading, oxyacetylene and plasma cutting, brazing, shielded metal arc welding, gas metal arc welding, flux core arc welding and gas metal and tungsten arc welding of ferrous and non-ferrous materials. Essential shop mathematics and English are taught throughout the course, which align with the NYS learning standards. Students are taught the skills needed to meet the guidelines of the American Welding Society to qualify as an entry level welder. Students completing the course will have a career portfolio. Students may choose to enter the workforce or continue their education to further develop their knowledge and skills in the welding and fabrication industry. Students that pass the NOCTI Welding assessment will qualify for a graduation pathway.

New Visions (Options for Honors Level Seniors)

Application, Letters of Recommendation and Interview required

Connections: Health Related Careers

4 credits per year 1 year program

Experience a day in the life of a practicing medical professional as they interact with colleagues, patients and families. Students directly observe professionals while providers care and treat a variety of patient conditions.

**requires an application and interview

*current immunization, PPD and physical exam required prior to the start of class

*must provide own transportation to class and clinics

*professional dress is required daily. A lab coat is to be purchased at the beginning of the school year

Legal Academy

4 credits per year 1 year program

Students will develop a network of professional connections through extensive field experiences across WNY. Shadow college level legal courses. Participate in the Erie County Bar Association's Mock Trial Competition.

*requires an application and interview

*students must provide their own transportation to Canisius College and internship sites

Zoo Wildlife & Conservation Careers

4 credits per year 1 year program

This program allows highly motivated, college bound seniors the opportunity to explore options in the many areas related to wildlife, conservation and zoebased careers. This program includes daily access to zoo grounds, internships with keepers, behind the scenes tours, and diverse guest speakers. The school year will culminate with a project in which students research and design their own animal exhibit with input from the Buffalo Zoo's animal experts.

Diesel Technology

4 credits per year- 1 year program

Diesel Technology is a 1-year Tech Prep program that connects qualified, highly-motivated high school seniors with professionals in the workplace. This competitive, off-site program at Conway Beam Truck Group in West Seneca provides unique training with nationally recognized partners.

*requires an application and interview

*small class sizes

*students must provide their own transportation

Education Pathways Academy

4 credits per year - 1 year program

Students will explore the field of education while earning high school and college credits. Courses are structured as Learning Communities, which consist of a cohort of students and faculty exploring a common theme.

*Application and interview process

*Students must provide their own transportation

Plant Science

4 credits per year - 1 year program

Students will learn greenhouse management, plant and soil science and landscape design. Topics of study include: the foundations of horticulture, plant cells and tissues, roots and soils, greenhouse management, watering and hydroponics, and native and invasive species. Students will engage in propagation techniques, and complete a variety of seasonal projects while on the grounds of the Buffalo and Erie County Botanical Gardens.

*Application and interview process

*Students must provide their own transportation to the Buffalo and Erie County Botanical Gardens and internship sites

Engineering and Manufacturing

4 credits per year - 1 year program

Students learn the fundamentals of engineering and manufacturing through theory-based and experiential learning rotations throughout the company. Students will learn fundamental engineering methodology and problem-solving skills, develop a network of professional connections through field experiences, and more. Topics of study include casting, molding, mechanical fastening, working with statics, dynamics, and mechanics of materials, working with vector properties and operations, and conductors, insulators, and semi-conductors. Students gain field experience at PCB Piezotronics.

Achievement Award

To encourage students to reach their full potential and to recognize their accomplishments and efforts, Career and Technical Education Achievement Awards are issued. Awards are given to students who develop the essential skill required for the workplace.

Award Requirements:

- Completion of all program requirements •
- Average of at least 85% for the two years •
- Good attendance (15 days absence per yearMaximum of 30 days for two years) •
- Punctuality (Maximum of 10 days late per year) •
- Portfolio i n program area with 75% average •

Regents Diploma with a Technical Endorsement

Students enrolled in a New York State approved Career and Technical Education program who successfully complete all requirements are eligible to have a technical endorsement affixed to their High School Diploma.

Requirements for a technical endorsement include:

- Completion of the required units of credit for graduation • Passing grades on the 5 required Regents examinations or approved alternatives • Successful completion and passing of a national technical assessment (NOCTI)
 - Successful completion of potfolio

The technical endorsement is imprinted on a seal to be affixed to the Diploma and says: "Career and Technical Endorsement".