Essex County Vocational Schools
Programs Available at the 4 Campuses

WEST CALDWELL CAMPUS

Automotive Technology
Emphasis is placed on providing the student with job entry-level skills. Areas covered include: tune-ups, brakes, exhaust systems and all areas of repair, replacement and diagnosis.

Business Technology
The Business Technology program prepares students for entry level positions and the opportunity to continue instruction in postsecondary institutions as bookkeepers, administrative assistants, receptionists, office clerks, and customer service representatives. Courses of study include Keyboarding, Computer Literacy Skills, Information Systems, Accounting, Personal Finance, Business Communications, Entrepreneurship, and General Office Procedures.

Cosmetology
The objective of the Cosmetology curriculum is to provide the student with sufficient training to pass the State Board Exam, become properly licensed, and perform duties required under such license to secure employment at an entry level. Class work includes lectures, demonstrations, practicing on mannequins, and written/practical examinations.

Culinary Arts
Students will learn the basis of what is involved in working and running a food service establishment. This entails learning about the many career options in the food service industry, safety and sanitation procedures, equipment and their uses, various cooking methods, food and utensil identifications, culinary terminology, front and back-of-the-house experience, handling money, basic math and measurements and an introduction to basic baking.

Electronics
Students are given a basic knowledge of electricity. Topics such as DC and AC theory, component identification, resistor network circuits, capacitors, and inductors are among some topics being taught. Students are introduced to basic telecommunications topics, electronic analog theory and labs, Network Copper Cabling and digital electronics.

Horticulture
The Horticulture program prepares students for careers and professional leadership in the production, processing, marketing of horticultural products and for related careers in plant technology, economics, natural resources and the environment. The program covers safety, a review of horticulture and related occupations, plant classification, reproduction, plant growth and development, pest control, retail flower shop operation, floral design greenhouse production, nursery management, landscape design and maintenance, turf, and establishing a horticulture business. Real world applications are provided with supervised agriculture experiences

Building Trades Technology
In this program students will progressively attain skills that are perquisite for entry level positions in the building trades. Students will learn basic aspects of carpentry, masonry, electricity, ceramic tiling, general building maintenance, and landscape construction.

**Music Production**
The Music Production program prepares students for a world of mass-distributed digitally enhanced and packaged entertainment in which musical artistry alone is no longer the key to career success. The students combine vocal music and dance artistry with technical skills in the use of modern electronic technology, to synthesize and produce music based, technology-enhanced entertainment product.

**Office Maintenance/Hospitality**
Students will work in a hands-on environment preparing for entry level positions within the Office Maintenance and Hospitality field of employment. Topics of study include: Safety and Security, Carpet/Floor Cleaning and Shampooing (methods and types of equipment), Interior and Exterior Painting, Public-Non-Public Types of cleaning, Housekeeping, Human Resource Issues (Skill Training, Motivation, and Self-management), and on premises laundry (planning and types of machines and equipment).

**Supermarket Careers**
This program instructs students who wish to work on the management level of supermarkets and various businesses. In an onsite market, students will learn the skills necessary to perform front end cashier operations and front end general operations to set up and maintain the various departments of a supermarket.

**WORK STUDY PROGRAM**
Offered in our four high schools, the Work Study Program offers students various opportunities to enhance existing course work and better prepare themselves for continued education and/or meaningful employment upon graduation from high school. Based on teacher and board approval, students are placed in “real life” job sites, enabling them to “connect” with the real world. Students will experience hands on training that will reinforce concepts learned in the classroom.

**BLOOMFIELD CAMPUS**

**Sustainable Energy Academy**
This academy will focus on issues surrounding energy sources and technologies that influence how energy is harnessed, processed, maintained and distributed. The curriculum will allow students to gain an awareness of and concern about environmental, economic, political, and social impacts of current energy usage and alternatives to the current models. Students will be trained and encouraged to enroll in career opportunities arising in the green energy field. The following Building Trades courses will emphasize the aforementioned green energy principles.

**Architectural Design and Drafting**
In the architectural design & drafting program, students vigorously study and practice architecture, and pre-engineering. Through the use of computer-aided drafting, students are instructed in the area of development of scale drawings, project layouts, and mechanical design.

**Carpentry**
This course provides instruction in layout, framing sheathing, and the basics of house construction and home rebuilding. Students will become familiar with carpentry hand tools, power tools, and construction tools as related to the process involved in carpentry. Safety is stressed throughout the course. Students will complete individual as well as group projects.
Electrical Maintenance & Construction
This course is designed to provide students with job entry level skills. Areas to be covered include: direct and alternating current, DC generators and motors, single and 3 phase AC motors, light and power wiring and single phase transformers. Students will receive hands on projects in both residential and commercial wiring.

Welding Technology
This course covers techniques of welding: acetylene, electric arc, mig and tig welding. Blueprint reading is also integrated into the course to enable students to fabricate projects according to print specifications.

HVAC (Heating, Ventilation & Air Conditioning)
This course emphasizes the principles of air conditioning, refrigeration and electricity. Proper tool usage, maintenance and troubleshooting needed for the trade are demonstrated. Commercial AC and refrigeration as well as gas heating systems are discussed.

COMMUNICATION/AUDIO VIDEO TECHNOLOGY
Commercial and Advertising Design
This program will provide students with a strong foundation in basic design concepts, graphic design and illustration using hands on and computer skills

Computer Typography & Composition
Students will study and practice entry level skills in computer graphics and printing. They learn the basics of layout and design and desktop publishing operations.

Graphic & Printing Equipment Technology
Students will study plate making, offset presswork, collating, bindery and print finishing techniques.

Multimedia Graphic Design
This program will instruct students on how to design, develop and create media content-graphics, animation, audio and video for websites, games and DVDs.

TV & Video Production
This course is designed to provide students with a solid foundation within the areas of digital filmmaking and television broadcasting. Students will learn the fundamentals of digital filmmaking, screenwriting, and using editing software. The program provides theory and practical application, with emphasis on entry-level employment upon graduation.

BUSINESS TECHNOLOGY
The Business Technology program prepares students for entry level positions and the opportunity to continue instruction in postsecondary institutions as bookkeepers, administrative assistants, receptionists, office clerks, customer service representatives, and retail sales associates. Students may choose one of three business-related career paths:

Administrative Assistant
Courses of study include Keyboarding, Computer Literacy Skills, Information Systems, Accounting, and General Office Procedures.

Accounting Technology
Courses of study include beginning, intermediate, advanced, and automated Accounting, Computer literacy Skills, Business Communications, and Entrepreneurship.

Marketing
Courses of study include Computer Literacy Skills, Hotel/Motel Management, Retail Marketing, Travel/Tourism, Business Communications, and Entrepreneurship.
WORK STUDY PROGRAM
Offered in our four high schools, the Work Study Program offers students various opportunities to enhance existing course work and better prepare themselves for continued education and/or meaningful employment upon graduation from high school. Based on teacher and board approval, students are placed in “real life” job sites, enabling them to “connect” with the real world. Students will experience hands on training that will reinforce concepts learned in the classroom.

NORTH 13TH STREET CAMPUS

LAW & PUBLIC SAFETY ACADEMY
This academy is structured to provide education and mentoring about our legal system. Students will be prepared for career paths in public safety fields such as law enforcement officers, emergency medical technicians, legal assistant, attorneys, and judges. The curriculum will emphasize the importance of education, physical and mental fitness, and personal decorum. The following courses are offered in this academy.

Criminal Justice/ Law Enforcement Studies
A course which focuses on the criminal justice system its organizational components and processes. Includes, instruction in street law, criminal law, police, fire and correctional systems.

Criminal Justice/Police Science
This course prepares students to perform the duties of police and public security officers.

Forensic Science
This course focuses on the application of the physical, biomedical and social sciences in the evolution of physical evidence. Includes, instruction in fingerprint technology, pattern analogies, crime scene analysis, forensic medicine etc, as well as the applicable law and regulations.

Geographic Information Systems
Various GIS software packages address the compilation, management and analysis of geographic elements in our communities. Data supplied include Homeland Security, Economic Development, and Law Enforcement software packages.

Spatial Technology and Remote Sensing
This program will prepare students to properly use GIS/RS technology to interpret and analyze data from satellite imagery. Upon completion of course students will take STARS certification test.

COMPUTER & INFORMATION SYSTEMS TECHNOLOGY
Instructional programs that focus on the Computer and Information sciences and prepare individuals for various occupations in these fields.

Computer System Networking
This program focuses on the design, implementation and management of linked systems of computers, peripherals and associated software. The course includes instruction system design, types of networks and troubleshooting.

Computer Maintenance Technology (A-Plus Technology)
This program includes instruction in basic computer design and problems of specific computer applications, component and system maintenance and inspection procedures, hardware diagnosis and repair.

**Web Page Design**
This course prepares students to apply HTML, XML, Java Script, graphics and applications in designing projects on the World Wide Web.

**HOSPITALITY / PERSONAL SERVICES**
These programs focus on communication skills, applicable regulations and principles of the Cosmetology and Food Services fields.

**Cosmetology**
This course includes instruction in hair cutting and styling, manicuring, pedicuring, facial treatments, shampooing, chemical applications, esthetics, shop management, sanitation and safety, customer service and applicable professional and labor laws and regulations.

**Nail Technician/Manicurist**
This course which prepares individuals to shape fingernails and toenails, remove unwanted skin and blemishes, apply polish and cosmetics to nails, and function as licensed manicurists or nail technicians/specialists. Included is instruction in manicuring theory, skin anatomy, nail growth, irregularities and diseases, sterilization and sanitation, equipment and table maintenance

**Culinary Arts/Chef Training**
A program that prepares individuals to provide professional chef and related cooking services in restaurants and other commercial food establishments. Includes instruction in recipe and menu planning, preparing and cooking of foods, supervising and training kitchen assistants, the management of food supplies and kitchen resources, aesthetics of food presentation, and familiarity or mastery of a wide variety of cuisines and culinary techniques.

**Baking and Pastry Arts**
A program that prepares individuals to serve as professional bakers and pastry specialists in restaurants or other commercial baking establishments. Includes instruction in bread and pastry making, bread and pastry handling and storage, cake and pastry decorating.

**CONSTRUCTION TRADES TECHNOLOGY**

**Drafting and Design Technology**
A program that prepares individuals to generally apply technical skills to create working drawings and computer simulations for a variety of applications. Includes instruction in specification interpretation, dimensioning techniques, drafting calculations, material estimation, technical communications, computer applications, and interpersonal communications.

**CAD/CADD Drafting**
A program that prepares individuals to apply technical skills and advanced computer software and hardware to the creation of graphic representations and simulations in support of engineering projects. Includes instruction in engineering graphics, two-dimensional engineering design.

**Building/Property Maintenance and Management**
A program that prepares individuals to apply technical knowledge and skills to keep a building functioning, and to service a variety of structures including commercial and industrial buildings. Included is instruction in the basic maintenance and repair skills required to service building systems, such as plumbing, electrical, major appliances, and other mechanical systems.

**BUSINESS TECHNOLOGY**
The Business Technology program prepares students for entry level positions and the opportunity to continue instruction in postsecondary institutions as bookkeepers, administrative assistants, receptionists, office clerks, and customer service representatives. Courses of study include Keyboarding, Computer Literacy Skills, Information Systems, Accounting, Personal Finance, Business Communications, Entrepreneurship, and General Office Procedures. A postsecondary partnership that will enable students to receive college credit in Accounting has been established with Farleigh Dickinson University.

WORK STUDY PROGRAM
Offered in our four high schools, the Work Study Program offers students various opportunities to enhance existing course work and better prepare themselves for continued education and/or meaningful employment upon graduation from high school. Based on teacher and board approval, students are placed in “real life” job sites, enabling them to “connect” with the real world. Students will experience hands on training that will reinforce concepts learned in the classroom.

NEWARK TECH CAMPUS

HEALTH CAREERS ACADEMY
The Health Careers Academy is comprised of programs that are designed to prepare students for career paths in nursing, dentistry, and other related health-occupations. The academy provides students with the necessary academic preparatory courses and technical skills required to meet state and national health science educational competencies. Instructors work closely with the University of Medicine and Dentistry to provide practical experiences for our students.

Dental Assistant – Upon completing this course, students are prepared to seek higher education in health care fields such as Dental Hygiene, or to seek employment as Dental Assistants. Upon reaching 18, Dental Assisting students are offered a 60 hour instructional program in Dental Radiology.

CNA (Certified Nursing Assistant) – This program will focus on nursing and culminates in state licensure as Certified Nursing Assistants. The course offers instruction in basic health care concepts, a thorough understanding of ethical conduct, and a mastery of entry level skills.

INFORMATION SYSTEMS TECHNOLOGY
Computer Systems Networking/Net Plus, Cisco Academy - This course prepares students for careers in network design and implementation. The hands-on-class will use state of the art hardware and software (routers, computers, switches, hubs, etc.)

Computer Maintenance Technology/A+ - This course prepares our students for careers in the Computer Technical Field. They will be prepared for careers such as Computer Technician, (troubleshooting and repairing computers) and help desk support (helping people to solve their problems with the software and operating system). Students should successfully pass the industry-recognized A+ Certification Exam.

Electronics/Computer Repair
This program prepares individuals to apply technical knowledge and skills to maintain and repair electronic/computer equipment. Including instruction in electrical/electronic circuitry and use of testing equipment.

AUTOMOTIVE CAREERS TECHNOLOGY
**Auto Body & Repair Technology**: Students will learn auto body and fender repair, paint preparation skills, and automotive detail to gain entry-level jobs in the auto body industry.

**Automotive Mechanics Technology** - Emphasis is placed on providing the student with job entry-level skills. Areas covered include: tune-ups, brakes, exhaust systems and all areas of repair, replacement and diagnosis.

**CONSTRUCTION TRADES TECHNOLOGY**
These instructional programs prepare individuals to apply technical knowledge & skills in the construction, inspection and maintaining of structures.

**Carpentry** - This course provides instruction in layout, framing sheathing, and the basics of house construction and home rebuilding. Students will become familiar with carpentry hand tools, power tools, and construction tools as related to the process involved in carpentry. Safety is stressed throughout the course.

**Mechanical Drafting/Cad** - This course uses the latest release of Auto CAD software to furnish the students with the skills necessary to function effectively in the design/drafting industry. Areas covered include: commands, creation of libraries, isometric and wire frame modeling, blocks and attributes.

**Electrical Maintenance & Construction** - This course is designed to provide students with job entry level skills. Areas to be covered include: direct and alternating current, DC generators and motors, single and 3 phase AC motors, light and power wiring and single phase transformers. Students will receive hands on projects in both residential and commercial wiring.

**Plumbing Technology** - This course places emphasis on providing the student with the necessary theory and hands-on applications needed for complete familiarity with all aspects of the plumbing field. Areas covered include: hand-tools, fitting, domestic water supply, drainage systems, fixtures and connections, pipes and fittings, cold/hot water supply, heating systems vents, waste disposal and code book technology.

**Welding Technology** - This course covers techniques acetylene, electric arc, mig and tig welding. Blueprint reading is also integrated into the course to enable students to fabricate projects according to print specifications.

**MUSIC PRODUCTION**
The Music Production program prepares students for a world of mass-distributed digitally enhanced and packaged entertainment in which musical artistry alone is no longer the key to career success. The students combine vocal music and dance artistry with technical skills in the use of modern electronic technology, to synthesize and produce music based, technology-enhanced entertainment product.

**BUSINESS TECHNOLOGY**
The Business Technology program prepares students for entry level positions and the opportunity to continue instruction in postsecondary institutions as bookkeepers, administrative assistants, receptionists, office clerks, and customer service representatives. Courses of study include Keyboarding, Computer Literacy Skills, Information Systems, Accounting, Personal Finance, Business Communications, Entrepreneurship, and General Office Procedures. A postsecondary partnership that will enable students to receive college credit in Accounting has been established with Farleigh Dickinson University.

**WORK STUDY PROGRAM**
Offered in our four high schools, the Work Study Program offers students various opportunities to enhance existing course work and better prepare themselves for continued education and/or meaningful employment upon graduation from high school. Based on teacher and board approval, students are placed in “real life” job sites, enabling them to “connect” with the real world. Students will experience hands on training that will reinforce concepts learned in the classroom.
SOUTH CLINTON STREET CAMPUS

CNA (Certified Nursing Assistant)
This is a 90 hour program which prepares the student for the NJ Department of Health Certification. The course will meet in the evenings Monday through Thursday. (See Adult Program Descriptions for additional information).

LPN (Licensed Practical Nurse)
This 12 month program prepares students for the NJ Board of Nursing exam. The course begins each September and meets Monday through Friday from 8:00 a.m. - 3:00 p.m. (See Adult Program Descriptions for additional information).

Reprinted from ECVS website: [www.essextech.org](http://www.essextech.org) November, 2009

For further information, log on to [www.essextech.org](http://www.essextech.org)