



Course Guide 2008-2009

Lehigh Career & Technical Institute



Lehigh
Career & Technical
Institute

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LCTI: EDUCATION AT ITS BEST!

Welcome to Lehigh Career & Technical Institute and the world of career preparation and lifelong learning. We appreciate your interest in our school and hope, as you read through our course guide, you will learn about many of our exciting and fast-growing programs. Lehigh Career & Technical Institute prepares students with the academic and technical knowledge needed to succeed in further education and careers. We are committed to excellence in providing the best education for our students.

Our competency-based approach to learning will further develop academic, technical and employability skills to get you on the right pathway to success.

CAREER PATHWAYS:

Career pathways is a framework for helping students learn, explore, and prepare for various careers within the 4 cluster areas

1. Arts & Humanities
2. Business & Communication Technology
3. Engineering & Industrial Technology
4. Health & Human Services

Students begin their pathway by systematically working through the following three areas:

- Career Awareness – Understanding of self and careers
- Career Exploration – Investigate and participate in career activities
- Career Preparation – Skill and knowledge development

Once the student has done some exploration, then a career cluster is chosen with the option of either a

**TRADITIONAL ACADEMIC PATHWAY OR
TECHNICAL ACADEMIC PATHWAY**

Career preparation continues throughout the high school years and beyond. Whether the objective is a four year college, a two-year college, military, apprenticeship, business or trade school, the GOAL is a successful career.

LIFELONG LEARNING PARTNERSHIP

LCTI AND PARTICIPATING HOME SCHOOLS

Lehigh Career & Technical Institute is host to programs that provide both career and technical training and academic education to students who desire specialized education for specific careers. Students have the opportunity to attend LCTI as a full-day or half-day student. The full-day option is available to tenth through twelfth graders, and half-day option to ninth through twelfth graders. Each of the nine sending districts will determine which options are available to each student.

Students enrolled in the full-day program receive both their career and technology training and academics at LCTI. The half-day student receives their standard high school curriculum at their home schools and their career and technical training at LCTI.

All students have their choice from over 40 career and technical programs, each grounded on a solid academic base. LCTI students progress at the same rate as their peers in the sending school districts, and receive their high school diplomas at the same time, providing all graduation requirements are met. LCTI students can participate in all activities such as sports, clubs, assemblies, dances, and other sending school events. LCTI awards certificates of completion and acknowledges student performance in the national competency testing program during Senior Recognition Evening. After successfully completing both written and practical tests in a program area, students receive a Pennsylvania Skills Certificate. The certificate recognizes high achievement by career and technical students on a national level, indicating to potential employers the skills mastered. All students receive a profile of competencies attained. The partnership between LCTI and the sending schools creates a positive mix for students with the aptitude and interest to attain their career goals.

SENDING SCHOOL DISTRICTS

Allentown
Catasauqua
East Penn
Northern Lehigh
Northwestern Lehigh
Parkland
Salisbury
Southern Lehigh
Whitehall-Coplay



ENROLLMENT OPTIONS

ACADEMIC CENTER STUDENTS

The Academic Center provides tenth through twelfth grade students the opportunity to attend LCTI for a full-day. Students take both academic and technical classes at LCTI. The Academic Center affords students the opportunity to take advanced coursework at Lehigh Carbon Community College in dual enrollment and middle college courses. Ask your guidance counselor for more information.

HALF-DAY STUDENTS

Some students will choose to enroll on a half-day basis. Half-day students receive career and technical training at LCTI and core academics at their high schools. All ninth grade students now have the option of attending LCTI on a half-day basis. Not all program areas are available to ninth grade students; and, they will not have an opportunity to enroll in the Academic Center until tenth grade. Please speak to your guidance counselor for information on available programs.

FLEX-TIME STUDENTS

Flex time enrollment is another option open to all Lehigh County students. Flex enrollment allows traditional education students to enhance their career education by attending LCTI for a semester or one year. Class time is divided into fifty-minute or eighty-minute blocks of time. The program allows for a combination of career and technical and traditional education, providing students with a broader foundation for their career goals.

Which enrollment option is right for you? Parents and students are encouraged to speak with their districts' guidance counseling staff and district officials to determine which enrollment options are available and would best benefit the student.

How do I apply? After you have spoken to your guidance counselor, please complete the application form located at the center of this guide and return it to your sending school guidance office.



OPEN HOUSE

Learn more about Lehigh Career & Technical Institute by visiting our facility. Each year, LCTI hosts its Open House for parents, prospective students and the general public. Personal invitations are sent to all Lehigh County students in grades 6-8. Call Student Services for more information: 610-799-1340.

Arts & Humanities



ADVERTISING DESIGN / COMMERCIAL ART

The Advertising Design/Commercial Art Program prepares students for careers as commercial and graphic artists in the fields of advertising, marketing, editorial design and public relations.

The course focuses on drawing, design and layout, graphic design, and illustration using Macintosh G5 computers and traditional media. Students will learn to draw basic geometric and organic forms in perspective, showing texture and tone. They will make line illustrations using pen and ink techniques, draw objects using elements of design and composition, and use decorative illustration. They will apply anatomy concepts in illustration drawing, make product illustrations, and explore a variety of drawing techniques using color media.

Students will use the Macintosh G5 computer and programs such as Adobe Photoshop, Adobe Illustrator, Adobe InDesign and Quark Xpress for image manipulation, logo design and editorial layout. Students interested in sign making will use vinyl and dye simulation machines along with Flexi Expert to create banners, signs, mugs, and other promotional items. Students who wish to be a part of the creative process in the world of advertising and commercial art are able to build a solid foundation for themselves by means of LCTI's Advertising Design/Commercial Art program. Students will also be prepared to continue their studies at The Art Institute of Pittsburgh, Lehigh Carbon Community College, or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Production Illustrator
Advertising Layout Artist
Book Illustrator
Outdoor Marketing Artist
Sign Maker
Magazine and Newspaper
Layout Artist
Packaging Artist
Freelance Artist
Display Designers
Advertising Sales
Art Director



Arts & Humanities

COMMERCIAL PHOTOGRAPHY / ELECTRONIC IMAGING

In the Commercial Photography/Electronic Imaging Program, students will receive training in photography, both in the studio and on-location, using the latest digital camera techniques and digital computer technology for processing and printing images. Students will use state-of-the-art DSLRs, work within a professional studio setting, and learn the proper use of lighting equipment the professionals use. In the “digital darkroom” students will also work with Adobe Photoshop and CS3 – the latest image editing and manipulation software, considered by professional photographers to be the industry standard.

The course includes professional lighting techniques and design elements for a wide variety of subjects, including wedding portraiture, products for advertising, photojournalism, and editorial markets. Students will also study the history of photography.

Graduates will be prepared to join the staff of a commercial studio as an entry-level photographer or photographer's assistant, or continue their training by obtaining an Associate or Bachelor's degree.



EMPLOYMENT OPPORTUNITIES

Professional Photographer
Photographic Processor
Photographic Reproduction Technician
Photojournalist
Photographic Retailer



Arts & Humanities



DRAFTING / COMPUTER AIDED DESIGN

Students in the Drafting/Computer Aided Design Technology Program combine their industrial and mechanical interests with their creativity, and work toward successfully moving into mechanical, architectural or civil engineering careers.

The curriculum allows students to expand their knowledge into other industrial areas like CAD/CAM programming and 3-D solid modeling. Students can now produce prototypes of 3-D models by using the Rapid Prototyping Machine, a state-of-the-art device which creates automatic construction of physical objects using solid freeform fabrication. Students will also assist in the design of the Student House Project.

The solid foundation LCTI provides will support its Drafting/CAD students who wish to pursue further education and professional careers at Lehigh Carbon Community College, Northampton Community College, or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Mechanical Drafter
Architectural Drafter
Construction Drafter
Civil Drafter
Set Designer
Municipality or Zoning
Consultant



Arts & Humanities

PAINTING AND DECORATING

Stenciling, faux finishes, wallpaper hanging, furniture refinishing, and decorative finishes are just parts of what the Painting and Decorating program is all about.

Students learn all aspects of the decorating craft. Students learn to create and maintain the interiors and exteriors of homes, businesses, and historical buildings. They receive hands-on experience through a variety of projects, including the Student House Project and other community projects.

Through professional techniques, students will learn to use paints, varnishes, glazes, and other coatings on all types of substrates. Venetian plaster and spackling techniques are also taught. Abrasive blast, airless spray, and high volume low pressure spraying are also covered within this course.

Those interested in becoming interior designers, restoration specialists or other home design professionals may continue their education at a college, university or specialty school upon completion of this program.



EMPLOYMENT OPPORTUNITIES

Window Display Designer
 Interior Designer
 Designer's Assistant
 Interior Painter/Decorator
 Painter's Assistant
 Movie Set Designer
 Restoration Specialist
 Sign Designer
 Theatrical Set Designer
 Exterior Painter/Decorator
 Paper Hanger
 Drywall Finisher



Business & Communications Technology

ADMINISTRATIVE OFFICE TECHNOLOGY / ACCOUNTING

The objective of this program is to prepare students to work in an office environment. This person is the foundation which keeps the office running. Software programs taught include Microsoft Word, Excel, PowerPoint, Access, and Publisher. Students work to increase keyboarding speed and accuracy. Accounting starts with the accounting cycle for a proprietorship. Topics covered include recording transactions in a general journal, financial statements, and adjusting and closing entries. Advanced accounting topics include using special journals and preparing payroll records. Computerized accounting is introduced using QuickBooks Pro. A section on Entrepreneurship is also offered. The requirements of business ownership will be discussed.

An opportunity to develop a business plan and learn how to market a business is included. Workshops on teamwork, speaking, and presenting are also used to give students skills needed in today's workforce. Post-secondary opportunities are available in this field with several area colleges and universities.

Students in this course may qualify for the Office Proficient Assessment Certification.

EMPLOYMENT OPPORTUNITIES

Administrative Assistant
Data Entry Operator
Word Processing Operator
Computer Specialist
Data Entry Supervisor
Executive Clerk
Accounting Clerk
Customer Service
Word Processing Supervisor



Business & Communications Technology



COMPUTER MAINTENANCE TECHNOLOGY

Students in the Computer Maintenance Technology Program prepare for careers in PC technical support, network management, computer security, computer science, and computer forensics. The curriculum initially focuses on computer hardware and operating systems in preparation for the CompTIA A+ Service Technician Certification. Students go beyond the basics and learn hardware and software operation and design concepts. This gives students the skills they need to be able to diagnose and resolve real-world PC problems with a variety of configurations and operating systems.

Students advance to Computer Network design and maintenance concepts and practices to prepare for the CompTIA Network+ Certification. They practice managing a range of equipment that includes both wired and wireless networks in a mixed hardware / software environment. This program relates closely to the Cisco program at area colleges and universities.

The Computer Maintenance Technology program provides a solid foundation for post-secondary education at Lehigh Carbon Community College or a college or university of a student's choice. This in-demand professional field also offers exceptional career options for our students.



EMPLOYMENT OPPORTUNITIES

Computer Support Technician

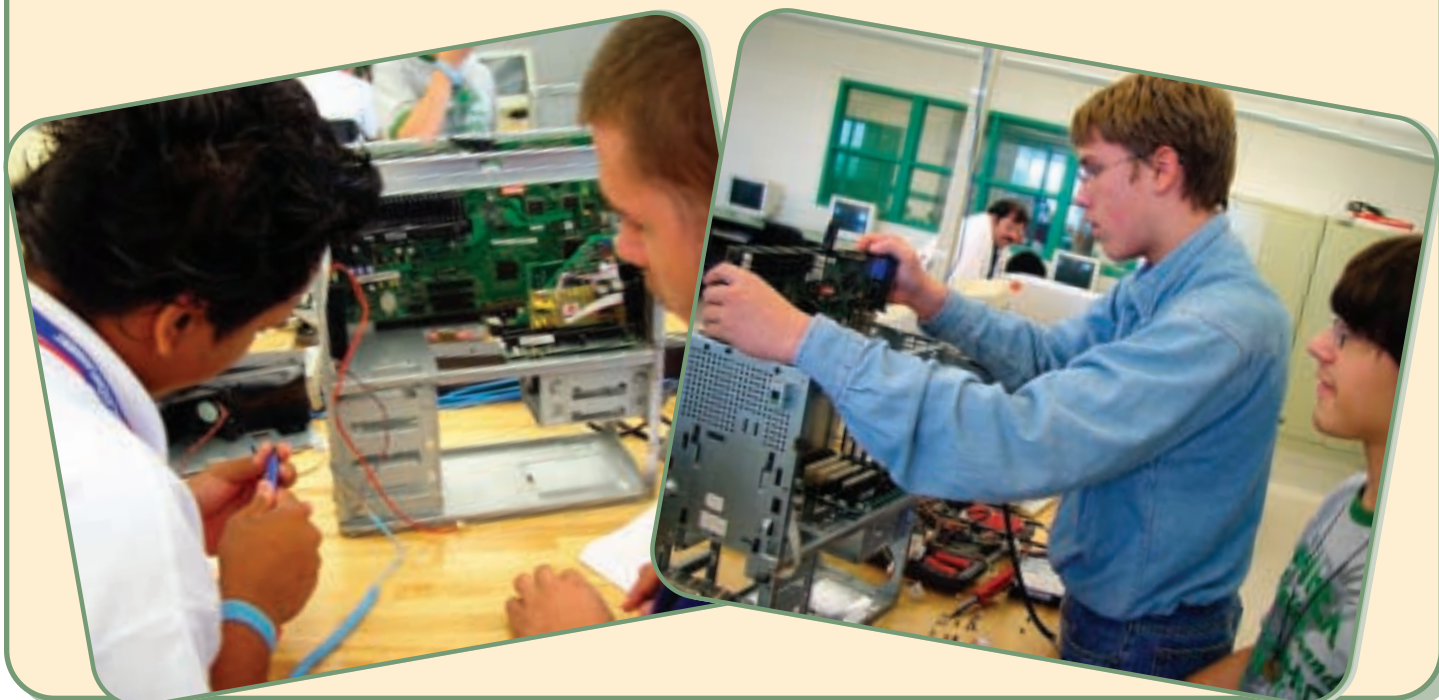
Help Desk Technician

Technical Sales Specialist

Residential Network Specialist

Network Analyst

Network Designer



Business & Communications Technology



MARKETING AND BUSINESS EDUCATION

Students in the Marketing & Business Education Program focus on marketing, promotions, business operations, finance, and banking, while gaining practical experience managing the school store. Students learn to operate a point-of-sale system; how to enter and track inventory, record sales, itemize sales by item and department, track employees and sales trends, and prepare purchasing information reports. Another focus of the program is entrepreneurship. Students will learn how to develop and implement ideas for starting, operating and owning a business.

Sports and Entertainment Virtual Business, Virtual Business Retailing and Virtual Management System Simulation programs teach students the necessary skills to become entrepreneurs and business leaders. Students in the program may qualify for their National Professional Customer Service Certification and National Professional Sales Certification, which are sponsored by the National Retail Federation, a partner in the National Skills Standard System. Students will be able to apply the skills and techniques learned in class to business scenarios such as sports team management, retail operations management and entertainment industry promotion and marketing.

Students also have the opportunity to be very involved in DECA activities, competitions and leadership roles. Upon completion of the program, students will be prepared to continue their studies at Lehigh Carbon Community College, The Travel Council or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Entrepreneur/Manager
Account Representative
Advertising Representative
Sales Associate/Manager
Travel & Tourism
Representative
Customer Service
Representative/Manager
Retail Manager
Sports and Entertainment
Management
International Business
Fashion Promotion



Business & Communications Technology



MATERIAL HANDLING / LOGISTICS TECHNOLOGY

The Material Handling/Logistics Technology Program actively engages students in the processes of receiving, shipping, order picking, and operation of numerous types of material handling equipment.

Students choose from a hierarchy of career objectives, helping them obtain gainful employment at all levels within an organization. Students learn in a working, state-of-the-art 17,000 square foot distribution center which houses today's most contemporary technology: a computer-controlled warehouse management system, computer-controlled vertical and horizontal carousels, and a computer-controlled integrated conveyor system.

All supply chain processes are replicated within the facility including receiving, put away, replenishments, order picking, value-added packing, and shipping. Students may obtain the National Safety Council Material Handling Equipment Certification. Students will also be prepared to continue their studies at Lehigh Carbon Community College or a college or university of their choice.

In addition, students selecting the Transportation Services/Logistics program will learn route and delivery scheduling, inbound and outbound shipping procedures, load configuration and balance, trucking routes incorporating reverse logistics, CDL operation and maintenance, and various transportation systems and methods.



EMPLOYMENT OPPORTUNITIES

Distribution Center
Manager/Supervisor
Forklift Operator
Order Selector
Reach Truck Operator
Customer Service
Representative



Business & Communications Technology



PRINT TECHNOLOGY / GRAPHIC IMAGING

Students in the Print Technology & Graphic Imaging program prepare for careers in creating printed items such as letterheads, business cards, newspapers, books, full color signs, product packaging, and more. The students will learn skills in customer service, desktop publishing, pre-press technology, photocopying, printing press operation, and bindery/book-making equipment.

In the desktop publishing and pre-press areas, students will learn to layout and design all types of printed items, using the latest Apple computer workstations outfitted with Adobe Creative Suite software. The page layout, photo editing, and color management skills learned in the program will place the students at the head of their fields upon graduation.

LCTI has the finest Heidelberg and Ryobi Presses, including one, two, and five-color equipment. Press specialty students will learn to skillfully handle paper, mix ink, match colors in printing, manage quality control, and properly maintain this sophisticated equipment.

Bindery students learn to turn printed work into finished pieces using folders, paper trimmers, collators, drills, binders, and gluing equipment. Packaging, inventory control, shipping, and estimation are other tasks performed in the lab.

The Graphic Arts Training Foundation (GATF) and the Printing Industry of America (PIA) organizations certify this program.

Students will also be prepared to continue their studies at Lehigh Carbon Community College, the Graphic Arts Education and Research Foundation (GAERF), or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Offset Press Operator
Desktop Publisher
Bindery & Finishing Specialist
Pre-Press Operator
Photo Editor
Customer Service Representative
Estimator
Quality Controller



Business & Communications Technology

WEB DESIGN / WEB PROGRAMMING

The Web Design/Web Programming lab at LCTI is designed to provide students who want to learn how to design and implement attractive web sites with a good understanding of emerging new media technology.

Students in the program develop an understanding of design fundamentals, a proficiency in HyperText Markup Language (HTML) coding techniques, and a working knowledge of a variety of web page development tools. HTML is the language of the web. All web pages depend, to a great extent, on HTML to organize and display everything including tests, graphics, and multi-media (video and sound clips) through web browsers.

Students will have the opportunity to select from four distinct career areas, including Web Page Designer, Graphic Designer, Multimedia Designer and Web Programmer.

Students are taught basic server-side techniques such as CGI/Perl, Javascript, XML, XHTML, and DHTML to handle everything from basic forms transmittal, building dynamic and interactive web pages and intranets, extranets, e-commerce applications, and the fundamentals of OBDC compliant databases in MySQL.



EMPLOYMENT OPPORTUNITIES

Web Site Designer
 Internet Technology
 Graphics Design
 Multi-Media Applications
 Web Site Administration
 Web Page Coder
 Web Programmer
 IT Instructor



Engineering & Industrial Technology



TRANSPORTATION SECTION

AUTO BODY / COLLISION REPAIR TECHNOLOGY

There are forty-three areas of study in the Auto Body/Collision Repair Technology Program taught at LCTI. The volumes of information students learn during their course of study and the number of skills they master enable them to step into the workforce immediately after graduation.

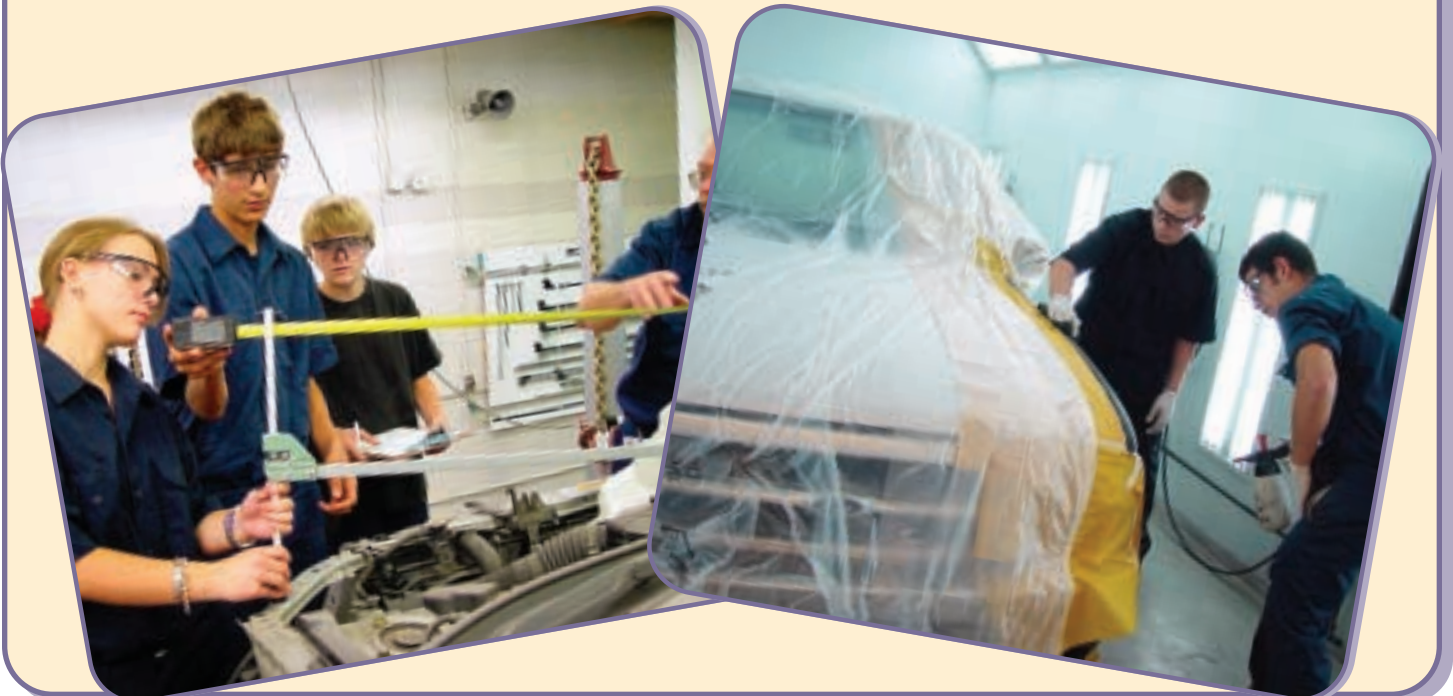
In the AutoBody/Collision Repair Technology program students begin by learning basic non-structural repair, panel replacement and alignment, and continuing their education with spray booth operation, including surface preparation, tinting and finish application, trim and detailing, sanding and filling, damage analysis, welding and much more.

The program is certified by Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF).

Students will also be prepared to continue their studies at Lehigh Community College, the Automotive Training Center, or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Collision Repair Technician
Spray Booth Painter
Metal Sander/ Refinisher
Industrial Spray Painter
Welder and Fabricator
Sheet Metal Worker
Frame Straightener
Repair Estimator
Insurance Adjuster



Engineering & Industrial Technology

AUTO TECHNOLOGY

TRANSPORTATION SECTION



If you are interested in cars and want to repair high-tech vehicles, take a closer look at LCTI's Auto Technology Program. This program, certified by Automotive Service Excellence (ASE) and National Automotive Technicians Education Foundation (NATEF), is designed for students who would like to work in the automotive service industry.

Students will learn about diagnosing and repairing all 8 ASE automotive areas: Automatic Transmission and Transaxle, Brakes, Electrical Electronic Systems, Engine Performance, Engine Repair, Heating and Air Conditioning, Manual Drive Train & Axles, Suspension & Steering. Students will learn how to use state-of-the-art manufacturer scan tools (Tech II, DRB III, Snap-on Scanner, Star Scan) and the Hunter R811 Alignment Machine using the DSP 6000 Series wireless paddles. The summer before the senior year, students may participate in an AYES Internship Program and work with a professional who's already experienced in the field.

The program instructors provide an excellent foundation for continuing education at Lehigh Carbon Community College, Northampton Community College, the Automotive Training Center, the Universal Technical Institute (UTI), the University of Northwestern Ohio, or a college, university or specialty school of the student's choice.



The program is certified by Automotive Service Excellence (ASE) and the National Automotive Technicians Education Foundation (NATEF).

EMPLOYMENT OPPORTUNITIES

- Automotive Technician
- Specialty Technician
- Service Manager
- Automotive Salesperson
- Lubrication Specialist
- Auto Technology Instructor
- Service Station Manager
- Independent Garages
- Manufacturer's Representative



Engineering & Industrial Technology



TRANSPORTATION SECTION

DIESEL MEDIUM / HEAVY TRUCK TECHNOLOGY

The U.S. trucking industry is thriving with nearly 10 million employees, more than 1.5 million tractors and annual revenues in excess of \$400 billion. Lehigh Career & Technical Institute's Diesel/Medium & Heavy Truck Technology Program prepares students for positions in this continually growing field.

Students in the Diesel/Medium and Heavy Truck Technology Program at LCTI are preparing to enter an exciting part of the workforce with the necessary technical expertise to succeed. This program prepares individuals to apply technical knowledge and skills to the specialized maintenance and repair of trucks, buses, and other commercial and industrial vehicles. Instruction includes diesel engine mechanics, suspension, steering, brake systems, electrical, electronic systems, preventive maintenance inspections, drive trains, gasoline engine mechanics, HVAC systems, and auxiliary equipment installation & repair.

Attendance in the Diesel/Medium and Heavy Truck Technology Program at Lehigh Career & Technical Institute will involve students in a bumper-to-tailight set of courses. In addition, students can earn up to 30 college credits at Lehigh Carbon Community College (LCCC) through our ACES Program. Other post-secondary opportunities include the Automotive Training Center or a college, university or specialty school of the student's choice.

This program is certified by National Automotive Technicians Education Foundation (NATEF) and the instructor is certified with Automotive Service Excellence (ASE).

EMPLOYMENT OPPORTUNITIES

Customer Service
Representative
Diesel Truck Master
Technician
Parts Salesperson
Gasoline Engine Technician
Diesel Engine Technician
Drive Train Technician
Brake Technician
Hydraulic Technician
Suspension & Steering
Technician
Electrical/Electronic Systems
Technician



Engineering & Industrial Technology

SMALL ENGINES / RECREATIONAL VEHICLE REPAIR

TRANSPORTATION SECTION

The Small Engines/Recreational Vehicle Repair Program at LCTI is a thorough course of study designed to produce small engine repair specialists.

Students are taught to understand fuel, ignition and exhaust systems, manual starters, electrical and cooling systems, clutches and drive mechanisms, small engine overhaul, welding, lawn and garden equipment repair, chain saw and string trimmer repair, outboard motor repair, motorcycle and all-terrain vehicle repair.

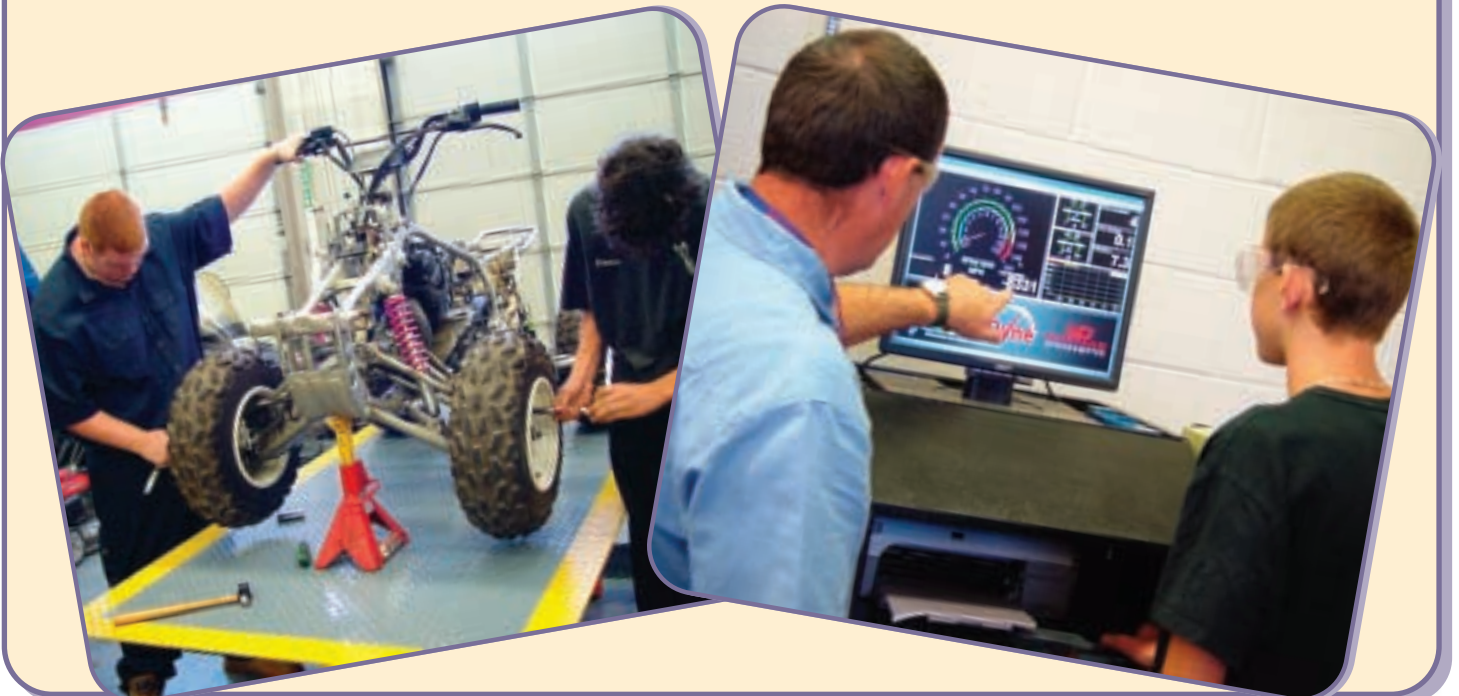
In the Small Engines Overhaul section of the course, students will learn how to inspect engine components, ridge ream a cylinder, grind valves and valve seats, inspect and repair valve guides. They will also deglaze and clean a cylinder, replace damaged threads using a tap and die set, helicoils or inserts, and remove and inspect and/or replace a crankshaft. Students will inspect and install piston rings and connecting rod assembly, inspect and install valve lifters, camshafts, oil dippers, slinger or pump, and a crankcase cover.



Students are also trained to use the dynamometer which checks for horse power, M.P.H. and foot pounds of torque for motorcycles and ATVs.

EMPLOYMENT OPPORTUNITIES

Motorcycle Technician
Lawn & Garden Equipment
Repair Specialist
Dealership Sales
Representative
Parts Person/Customer
Service
Boat Engine Technician
Recreational Vehicle
Repair Specialist



Engineering & Industrial Technology

CONSTRUCTION SECTION

CABINETMAKING & MILLWORK

Participation in the Cabinetmaking & Millwork Program is an excellent opportunity to become part of a long tradition of skilled tradespersons whose craftsmanship is sought out by people who love and appreciate quality.

Students in the Cabinetmaking & Millwork program will learn wood technology, product fabrication, finishing, and cabinet installations. Students will receive occupational applied instructions for the safe operation of hand tools, power tools, and trade-related machinery. In addition, solid surface fabrication and CNC technology are recent additions to the curriculum.

Post-secondary opportunities may be pursued through trade schools, community colleges, or universities offering wood technology, furniture manufacturing, design and construction engineering or management. Highly-skilled woodworkers and those trained in computer-controlled machinery operation will be in the highest demand over the next several years.

In the Cabinetmaking & Millwork program, students' skills are integrated into the design, construction, and installation of kitchens and bathrooms at the LCTI Student House Project as well as into sending schools and personal construction items.

EMPLOYMENT OPPORTUNITIES

Production

Managers/Supervisors
Cabinetmaker/Bench
Carpenter
Finish Carpenter
Machinery Operator
Furniture Finisher
Kitchen & Bath Design
Consultant
Sanders
Production Worker



Engineering & Industrial Technology



CARPENTRY

CONSTRUCTION SECTION

The Carpentry Program at LCTI provides an opportunity for students to gain a solid background in printreading, the safe and effective use of hand, portable power, and stationary power tools, scaffolding and specialty tools used in the trade. Additionally, the program provides an opportunity for students to learn about the materials and processes used in residential construction.

Students will receive instruction in print-reading, site preparation, building layout, footer and basement wall forming, concrete flatwork, floor/ wall/ ceiling and roof framing, shingle roofing, installing windows and exterior doors, siding and exterior finish, insulation, drywall, interior finish, and stair construction.

Students' skills are initially developed through hands-on projects in the lab. As the students' skill levels progress, they will have the advantage of participating in the construction of the Student House Project. This award-winning program provides students the opportunity to reinforce learned carpentry skills by applying them to the construction of a real house on a residential lot in the Schnecksville area.

Carpentry Program completers may choose to enter directly into the workforce or continue their education at a college or post-secondary trade school. Many local contractors hire LCTI program graduates. Students in Carpentry will also be prepared to continue their studies at Lehigh Carbon Community College or a college or university of their choice.



EMPLOYMENT OPPORTUNITIES

Contractor
Construction Superintendent
Carpenter
Finish Carpenter
Rough Carpenter
Drywall Applicator
Siding Installer
Roofing Installer
Carpenter's Assistant



Engineering & Industrial Technology

CONSTRUCTION SECTION

Students who have an interest in residential, commercial, and industrial electrical and Fluid Power Technology planning or wiring would be wise to consider the Electrical Technology Program at LCTI.

In this program, students learn how to prepare Non-Metallic (NM) Cable for connection to devices. They are taught to install a duplex and split wired duplex receptacle, a single pole switch, 3-way and 4-way switch, and a Ground Fault Circuit Interrupter (GFCI) in the Switches and Receptacles portion of their course.

In the Electrical Wiring Commercial and Industrial portion of the course, students must demonstrate cutting, cleaning, threading ridge metal raceway, and the four major bends used for conduit raceways. They must install a surface mounted wiremold raceway system and a nonmetallic raceway PVC system. Students are taught to interpret commercial and industrial building plans and specifications, install three-phase service panels, demonstrate three-phase GFCI protection, wire an industrial control center, and demonstrate hydraulic tool systems and core-hole drilling. Students can earn certification in HTI+ through Smart Home Training where technology for home audio, home security and home theater is taught. The implementation and inner-workings of internet cameras is also part of the course.

This program is certified by the National Center for Construction Education and Research and the ABC Apprenticeship program.

Students can complete the Electrical Technology Program and then move into the Electro-mechanical Automated Systems Technology Program for training in the industrial area. Students completing these two programs will have specialized skills needed in today's workforce.

ELECTRICAL TECHNOLOGY

EMPLOYMENT OPPORTUNITIES

Electrical Technician

Power Distribution
Technician

Industrial Electrician

Commercial Electrician

Residential Electrician

Maintenance Electrician

Electrician's Helper

Electrical Supply Technician



Engineering & Industrial Technology

ELECTROMECHANICAL / MECHATRONICS TECHNOLOGY

CONSTRUCTION SECTION



Automated manufacturing is now a standard process in most industries. The Electro-mechanical Automated Systems Technology program provides a solid foundation in basic electricity, industrial electricity, industrial electronics, and automated manufacturing.

Students also study motors, generators, transformers, motor controls, programmable logic controllers, hydraulics, pneumatics, AC/DC drives, mechanical drive systems, and robotics.

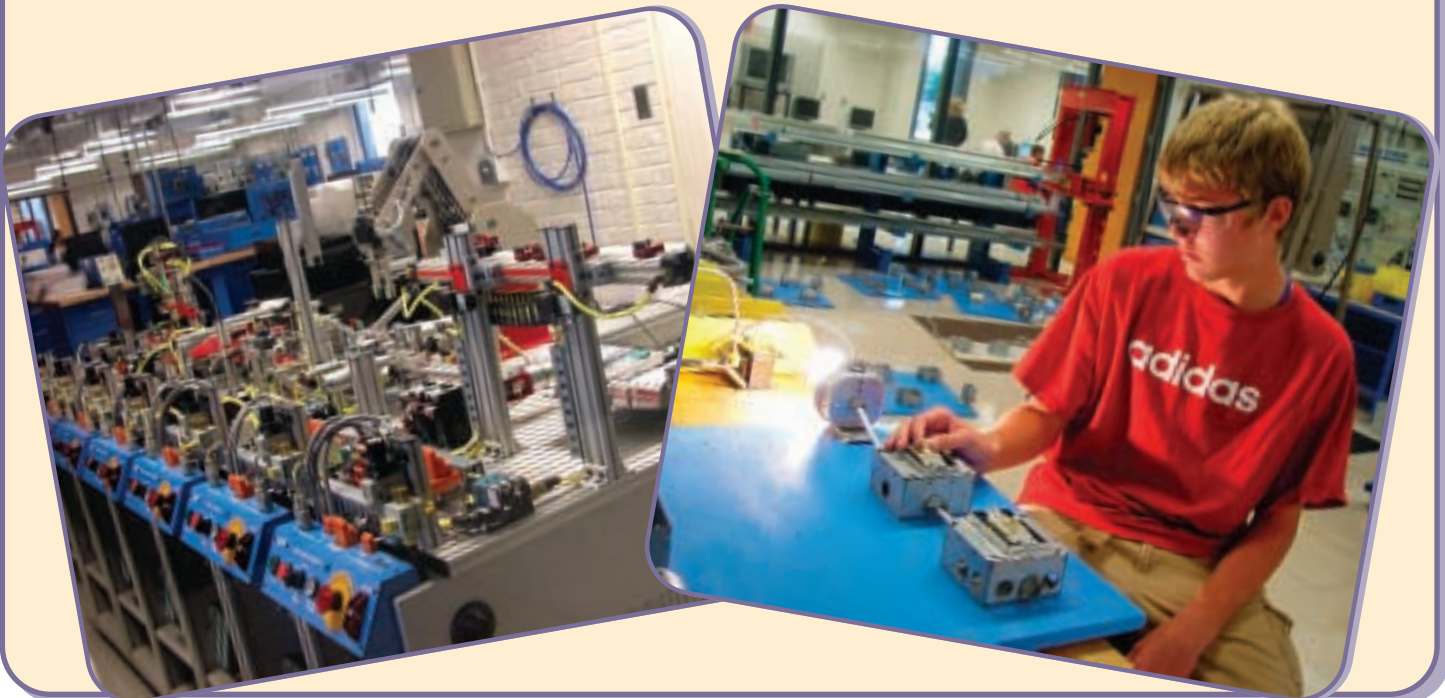
Students will be taught on a training device which simulates an automated production line, duplicating automated manufacturing where fluid control, robotic control and electronic control are paramount. Students will be able to enter the industrial sector and perform maintenance and trouble-shooting with a mentor.

Program completers will be prepared to enter the world of work as an apprentice technician or continue their post-secondary education at Lehigh Carbon Community College or a college, university or trade school of their choice.



EMPLOYMENT OPPORTUNITIES

Automated Manufacturing Technician
Industrial Maintenance Technician
Electrical/Electronic Technician
Mechanical Technician
Engineering Technician
Nuclear Plant Technician
Power Generation Plant Technician



Engineering & Industrial Technology

CONSTRUCTION SECTION

PLUMBING AND HEATING

A career in plumbing and heating encompasses much more than unplugging drains and repairing broken pipes. Students in LCTI's Plumbing & Heating Program are taught to understand and appreciate the entire scope of the industry as they acquire the skills necessary to be successful. The process takes them beyond the repair aspect, and expands into planning, installing and assembling heating and plumbing systems, including hydronic heating systems.

Some plumbing professionals focus their expertise in the field of plumbing while others choose to specialize in providing service repair and installing heating systems. Whatever students' career objectives are in the area of Plumbing and Heating, LCTI's instructors help their students achieve them through a comprehensive program which includes steel/iron pipe, copper pipe and tubing, cast-iron pipe, PVC pipe, plastic pipe, rough plumbing, plumbing codes, finished plumbing, fundamentals of electricity, water tap fundamentals, and draft and combustion of oil-fired heating systems.

Students are also trained on the state-of-the-art Vanguard Piping Systems equipment. And, those who complete the Plumbing program fast track into the Allentown Master Plumbers Association's four-year plumbing apprenticeship program.

This program is certified by the National Center for Construction Education and Research and the ABC Apprenticeship program.

EMPLOYMENT OPPORTUNITIES

Service Repair Plumber
Heating Repair Technician
Oil Delivery Service
Bathroom Installer
Kitchen Plumbing Installer
Service Engineer
Fixtures Sales Representative
Heating Systems Sales Representative



Engineering & Industrial Technology

MASONRY

The comprehensive Masonry Program at LCTI teaches students how to read blueprints, practice plumbing, level a small project, and become familiar with all types of masonry materials. Students learn to work with tile, brick, concrete, block and stones on their way to becoming entry-level masons. Students apply their growing expertise on masonry requirements of the Student House Project.

In the Basic Processes of Masonry aspect of the course, students learn to spread mortar on brick and block, bond masonry units, apply head joints to brick, make head joints and bed joints for concrete block, cut brick with a brick hammer, chisel, power saw, or splitter. Students will also learn to set ceramic tile, apply concave jointing to brick and block, apply raked and raised bead jointing to stone, apply jointing to ceramic tile, set up (place brick on the job site or work station), properly construct and set scaffold to meet O.S.H.A. regulations, and use a cleaning agent when removing excess mortar and stains from brick work.

In the Masonry Bonding section of the course, students construct brick and stone veneer walls, use the basket weave pattern for brick paving, demonstrate proper adhesive of mortar, use the herringbone pattern in brick paving, and use interlocking concrete pavers.

The Masonry Program at LCTI provides a solid foundation for those students desiring to enter the workforce as entry-level masons immediately and for those who want to continue their education on a post-secondary level.



CONSTRUCTION SECTION

EMPLOYMENT OPPORTUNITIES

Bricklayer
Plasterer
Tile Setter
Stone Mason
Estimator
Contractor
Concrete Finisher
Mason Tender
Firebrick Bricklayer



Engineering & Industrial Technology



CONSTRUCTION SECTION

HEATING / AIR CONDITIONING AND REFRIGERATION

The regular use of heat, air conditioning and refrigeration conveniences in the United States produces a demand for skilled technicians to install and repair equipment in homes, offices, factories, warehouses, stores and restaurants. The country's diverse climate makes employment in the Heating/Air Conditioning and Refrigeration field attainable in virtually any area students may ultimately reside.

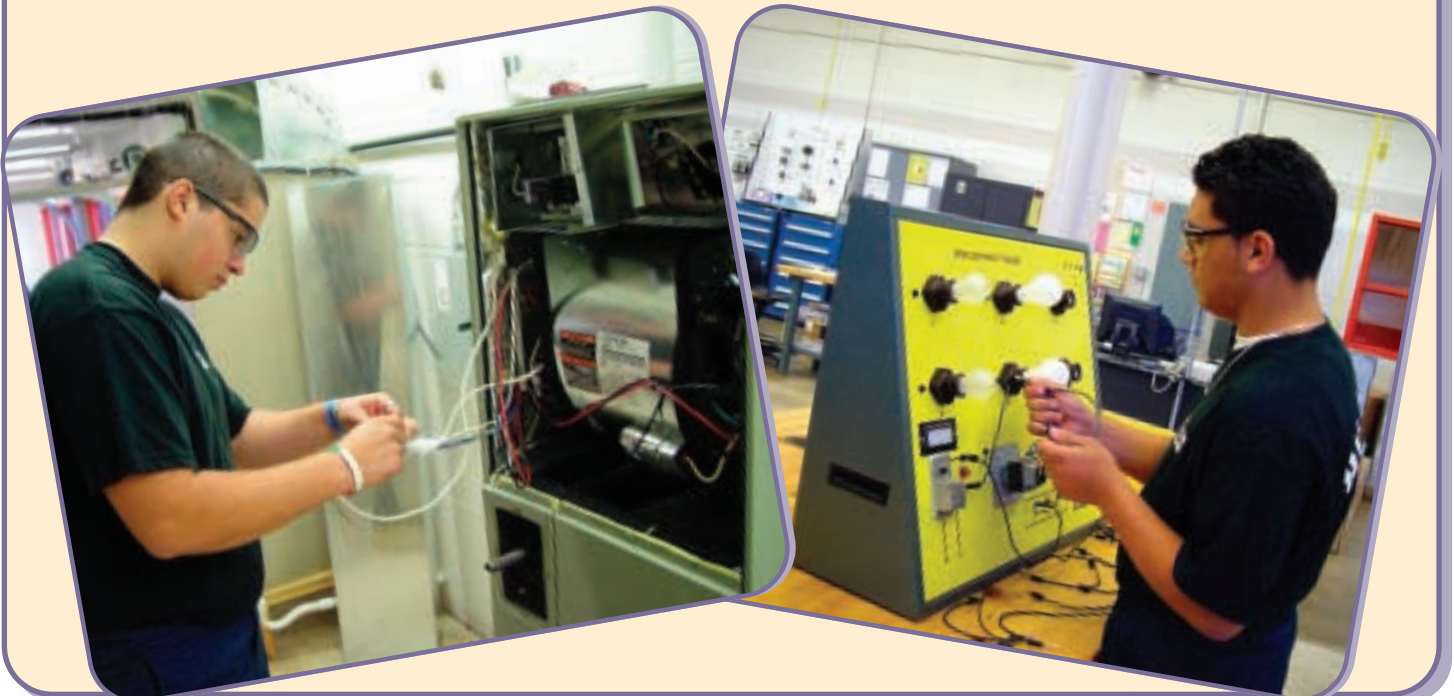
Skilled technicians install/repair equipment, read/interpret blueprints and drawings, prepare their own working diagrams, cut/solder/fit various types of pipes, and cut/fabricate fiberglass and sheet metal ducts to allow for airflow throughout buildings, all of which make for a work environment that is both challenging and rewarding.

Graduates of LCTI's Heating, Air Conditioning & Refrigeration course of study are able to continue their education at Lehigh Carbon Community College or a college or specialty school, and ultimately become respected professionals in the field. Post-secondary education is becoming the standard for technicians in HVAC/Refrigeration, and LCTI's education provides the foundation upon which successful careers can be established.

This program is certified by the National Center for Construction Education and Research, the ABC Apprenticeship program, Refrigerant Transition and Recovery Certification (EPA), Industry Competency Exam (ICE) Certification and Gaslight CSST Piping Certification.

EMPLOYMENT OPPORTUNITIES

Service Repair Plumber
Heating Repair Technician
Oil Delivery Service
Bathroom Installer
Kitchen Plumbing Installer
Service Engineer
Fixtures Sales Representative
Heating Systems Sales Representative



Engineering & Industrial Technology

HEAVY EQUIPMENT OPERATIONS / PREVENTIVE MAINTENANCE

CONSTRUCTION SECTION

Residential and commercial construction continues to be one of the fastest growing industries nationally, and skilled Heavy Equipment Operations/Preventive Maintenance graduates are in high demand.

The Heavy Equipment Operations/Preventive Maintenance Program offers students a diverse and fast-paced work environment where they will learn safety, maintenance and operating techniques for a wide variety of earthmoving equipment.

Students will learn about soils, erosion and sediment control, site preparation/excavating techniques, aggregate production, concrete and asphalt paving, surveying and grading, and utility installation.

Students will also learn machine systems, parts identification and ordering, and preventive maintenance techniques in a state-of-the-art facility.



EMPLOYMENT OPPORTUNITIES

Civil Engineering Technician
Excavating and Loading
Machine Operator
Mobile Heavy Equipment
Mechanic
Surveying Technician
Construction and Building
Inspector



Engineering & Industrial Technology

LANDSCAPE CONSTRUCTION / ENVIRONMENTAL DESIGN

CONSTRUCTION SECTION

For students who enjoy being outdoors and are looking for ways to combine creativity with an appreciation for environmental protection/improvement, LCTI's Landscape Construction/Environmental Design satisfies those requirements.

From planning to planting, students are exposed to hands-on opportunities on the grounds of Lehigh Career & Technical Institute. They learn the most up-to-date features in landscape technology, arbor culture, turf management and grounds maintenance. In addition, students are taught safe operation of tractors, front-end loaders, soil augers, and tree digging equipment.

The program is divided into seven subject areas allowing students to experience a broad and in-depth view of the "green industry", with plant identification, equipment operation, nursery production, and pest management being the most in-depth subject areas.

Students in this program also participate in LCTI's Student House Project, community service projects, and FFA, an agricultural education organization which allows them to showcase their talents.

EMPLOYMENT OPPORTUNITIES

Landscape Designer
Landscape Contractor
Greenskeeper
Arborist
Entomologist
Landscape Consultant
Plant Pathologist
Horticulture Instructor
Nursery Employee



Engineering & Industrial Technology



ELECTRONICS TECHNOLOGY / NANOFABRICATION

MANUFACTURING SECTION

It is difficult to think of an occupation which does not use electronics. From audio systems to the latest nanotechnology advances, electronics affects every part of our lives.

While the electronics industry covers a wide range of occupations, these occupations have some things in common. All electronics workers share a language of terms and symbols, plus the knowledge of certain theories and essential skills. This course will introduce these basic electronic terms and theories.

Students in the Electronics Technology/Nanofabrication program will begin their studies with simple circuits and progress to the complexity of nanofabrication. Nanofabrication is used in the production of semiconductor devices. In addition, this course teaches hands-on applications of electronics and troubleshooting.

Students' skills are enhanced through hands-on experimentation, leading to enhanced troubleshooting and problem solving skills. A state-of-the-art cleanroom provides a live work environment where students may practice many skills taught.

Students may obtain their IPC Solder Certification and Mobile Electronics Certified Professional Certification, and may continue their post-secondary education at Lehigh Carbon Community College and most colleges or universities.



EMPLOYMENT OPPORTUNITIES

Electronics Technician
Repair Person
Engineering Technician
Electronics Production
Engineer's Assistant
Cleanroom Maintenance



Engineering & Industrial Technology



MANUFACTURING SECTION

PRECISION MACHINE TOOL TECHNOLOGY

This course is based on the most productive and useful aspect of the machine trade: the hands-on/skills portion. Skills are learned and developed by making projects like steel hammers, aluminum dice, rings, aluminum pen and pen holders, shifter knobs, piston key rings, and mag flashlights. In the Precision Machine Tool Technology Program, students are tasked in the following areas: General Machine Shop Competencies, Lathe, Vertical Milling Machine, Grinding, Drill Press, Semi-Precision and Precision Measurement, Blueprint Reading, Mill CNC Programming, Lathe CNC Programming, Mastercam Programming, and Related Math.

Manufacturing consists of highly specialized processes to produce a product, and precision machining is the core or base of manufacturing. Commonly known items such as airplanes, automobiles, computers, medical equipment, televisions, and electronic equipment are all products of precision machining. Almost every product we enjoy in our modern society is manufactured. Highly-skilled technicians such as machinists and tool and die makers help design and make parts for manufacturing. Most plants are very clean and air-conditioned, and use modern computerized machines to make precision parts.

LCTI has been selected as a Haas Technical Education Center which is a partnership between LCTI and the Lance Haas Factory Outlet. This partnership provides students with the opportunity to receive instruction on the latest CNC machines which will provide them with extensive applications-based laboratory activities, projects and assignments.

The Precision Machine Tool Technology Program at LCTI is nationally certified and accredited by the National Institute for Metalworking Skills (NIMS). Students will also be prepared to continue their studies at Lehigh Carbon Community College or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Machinist
Tool and Die Operator
Millwright
Inspector
Machine Tool Operator
Model Maker
Manufacturing Technician
CNC Programmer
Process Technician



Engineering & Industrial Technology



PRE-ENGINEERING AND ENGINEERING TECHNOLOGY

MANUFACTURING SECTION

The Pre-engineering and Engineering Technology program is designed to create a broad-based foundation for students who desire a career as an electrical, mechanical or manufacturing engineer.

LCTI's Pre-engineering and Engineering Technology Program uses the Project Lead the Way curriculum, a national program that provides course standards. This program is designed to raise students to the required levels necessary to successfully continue their education at two or four year colleges.

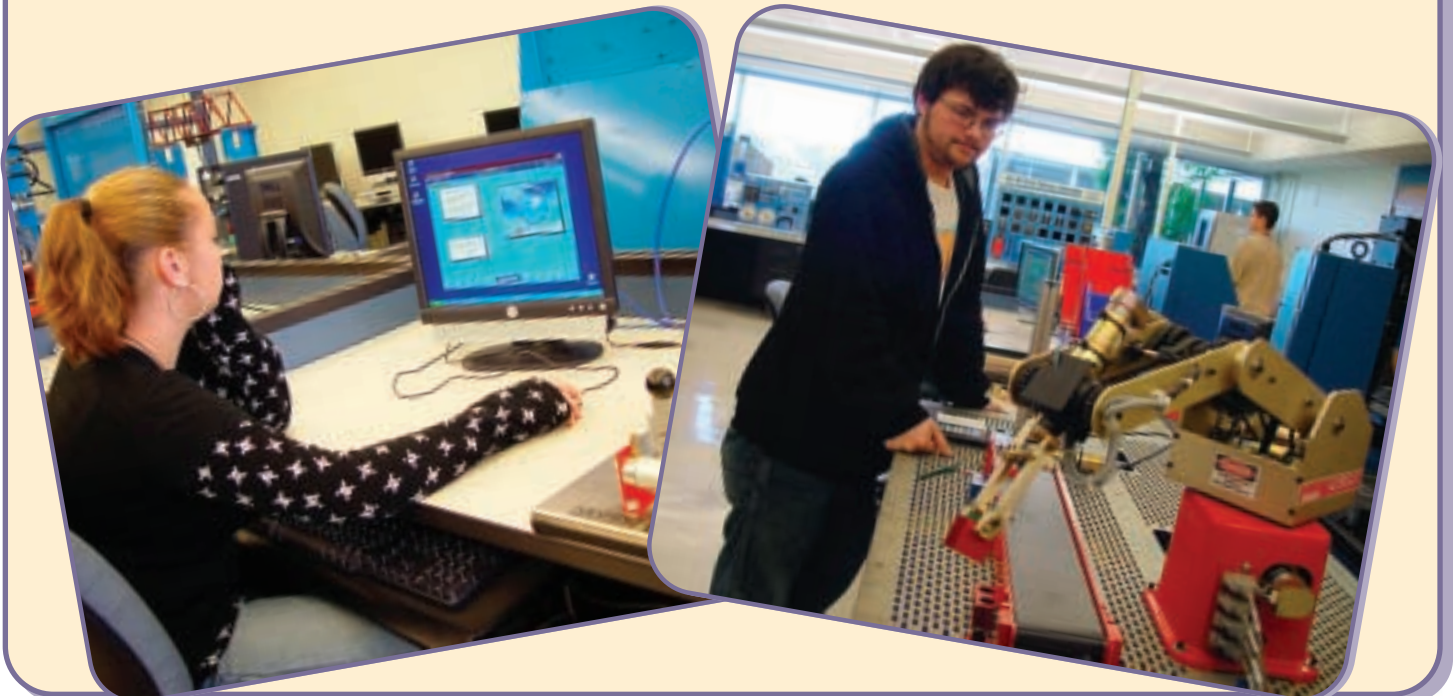
LCTI's program is a four-year course of study with a recommended prerequisite of Algebra I. If a student completes the full four-year program, they will learn Introduction to Engineering Design and Principles of Engineering, Civil Engineering and Architecture, Computer Integrated Manufacturing (CIM), and Digital Electronics Robotics.

LCTI is working on a seniors-only dual enrollment program affiliation with Penn State University and Temple University to allow LCTI pre-engineering students to achieve an Associate's Degree after completion of this course. Students will also have the option of continuing their studies at Lehigh Carbon Community College and transferring to a four-year degree program in Mechanical Engineering or Machine Design.



EMPLOYMENT OPPORTUNITIES

Machine Design
Electrical Design
CNC Machining
Robotics



Engineering & Industrial Technology



MANUFACTURING SECTION

WELDING TECHNOLOGY

Enrollment in the Welding Technology Program at LCTI will provide students with a proper foundation for welding careers. The program operates under Entry Level Certification authorized by the American Welding Society.

Classes are designed to prepare students for the American Welding Society Entry Level and Advanced Level Welder Certifications. The nine performance tests required for the Entry Level Welder are Shielded Metal Arc Welding 2G and 3G position on Mild Steel, Gas Metal Arc Welding Short Circuit Transfer Mode on Mild Steel and Spray Transfer Mode on Mild Steel, Flux Cored Arc Welding Self Shielded and Gas Shielded on Mild Steel, Gas Tungsten Arc Welding on Plain Carbon Steel, Stainless Steel, and Aluminum.

Students are also taught Oxyfuel Gas Cutting Principles and Practices (Manual and Machine), Arc Cutting Principles and Practices (Air Carbon Arc Cutting and Plasma Arc Cutting including CNC), Welding Inspection and Testing Principles.

This program is certified by the American Welding Society.

Students will also be prepared to continue their studies at Lehigh Carbon Community College, Northampton Community College, or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Welder's Helper
Arc Welder
Combination Welder
Pipe Welder
Welding Technician
Automotive Repair Shops
Building Restoration
Metal Fabricators
Shipbuilding Companies



Health & Human Services

COMMERCIAL BAKING

Commercial Baking teaches students the fundamental principles and procedures for preparing baked goods, pastries and desserts. With its attention to both theory and practice, the course is designed to equip students for above entry-level positions in the food service area with special emphasis in commercial baking.

Subjects in theory include measurements, understanding ingredients and product problem solving. Students are exposed to practical tasks, including decorated cakes, breads and rolls, sweet goods, Danish pastries, pies, and doughnuts. A uniform consisting of a chef coat, chef pants and a hat are required daily in the Commercial Baking program.

Some areas of study include Nutrition, Principles of Bakery, Operation and Maintenance of Equipment, Description and Function of Ingredients, Cake Decorating, Product Merchandising, Buffets and Banquets, and Science of Food Technology. Students will also learn special areas of contemporary baking study including dietetic, gluten-free, no trans fat, and whole grain baking.



EMPLOYMENT OPPORTUNITIES

Pastry Chef
Head Baker
Baker's Helper
Caterer
Cake Decorator
Food Salesperson



Health & Human Services



COSMETOLOGY

LCTI's Cosmetology Program includes the study of hair, skin, nail technology and pedicuring, and facial services where students learn in a live work environment lab. The Cosmetology lab does provide services to the public, and all work is completed by our highly skilled students.

Hair Styling skills include using the computer imaging system, setting and combing out, using pin curls/roller curls, performing special occasion styles and blow-dry styling techniques, styling hair with thermal iron, performing thermal hair straightening, braiding the hair, cleaning/shaping/styling a wig, and fingerwaving.

Esthetician skills include plain facial with a facial pack, proper operation of skin care equipment, applying makeup to enhance a patron's features, arching eyebrows using tweezers, performing hair removal using wax depilatory, using facial bleach and chemical facial depilatory, and the application of artificial eyelashes.

This program is certified by the PA State Board of Cosmetology in the areas of nail technician, esthetician and cosmetologist.

Students will also be prepared to continue their studies at Lehigh Carbon Community College or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Cosmetologist
Wig Stylist
Salon Manager
Salon Owner
Nail Technician
Makeup Artist
Platform Artist
Retail Specialist



Health & Human Services



CULINARY ARTS

LCTI's Culinary Arts Program is one of only 22 career and technical programs in the United States – and the only one in Pennsylvania – to earn "Exemplary Status" from the National Research Center for Career and Technical Education at the University of Minnesota.

The Culinary Arts Program at LCTI starts out with occupational procedures where students learn kitchen safety, sanitation, the use of major equipment, hand tools and various positions of the brigade system, as well as bakery and cake decorating skills.

Front of House topics include rules of table service, duties of the food and beverage manager, sales techniques for service personnel, and inter-relationships and work flow between the dining room and kitchen operations.

Back of House topics include identification and preparation of breakfast cookery, pantry preparation, meat and seafood fabrication, vegetables, tallow and ice sculpting, basic food preparation at restaurants and institutional sales.

This program is certified by the American Culinary Federation and students may earn their SERVSAFE certification through local colleges and universities.



Students will also be prepared to continue their studies at Lehigh Carbon Community College, Florida Culinary Institute, Johnson and Wales University, or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Chef
Pastry Chef
Short Order Cook
Server
Foodservice Manager
Meat Processor
Caterer
Cake Decorator
Preparation Cook
Food Salesperson
Garde Manager
Entrepreneur



Health & Human Services

DENTAL TECHNOLOGY

LCTI's Dental Technology Program provides students with a variety of skills that will enable them to become a dental assistant, dental receptionist, dental laboratory technician, and/or pursue a career as a dental hygienist.

Students train in a state-of-the-art facility allowing them to become skilled on the latest industry technology.

The major areas of study in the course include dental radiology, oral pathology, chair-side dental assisting, anatomy and physiology, dental materials, sterilization, and dental office business procedures.

Eventually, students may have the opportunity to be certified in dental radiology. And, the course of study in the program provides a very strong segue into dental hygienist programs at community colleges.

EMPLOYMENT OPPORTUNITIES

Dental Assistant
Dental Receptionist
Dental Laboratory Technician
Medical Secretary



Health & Human Services



EARLY CARE & EDUCATION OF YOUNG CHILDREN

Early Care & Education of Young Children prepares students for employment in early childhood education and services for early childhood development. This program provides the foundations for study in higher education, leading to early childhood education and child-related careers.

The course of study includes, but is not limited to, planning and guiding developmentally appropriate activities for young children, developmentally appropriate practices of guidance and discipline, overview of management and operation of licensed child care facilities, Pennsylvania child care regulations and licensing requirements, and employability skills. Once acquiring their clearances, students participate in the education of the pre-school age children who attend an onsite day care facility.

The required clearances to do this are Child Abuse Clearance, Criminal History Clearance, annual physical with Manitou test, two letters of reference, and a resume.



Students will also be prepared to continue their studies at Lehigh Carbon Community College or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Teacher Assistant
Assistant Group Supervisor
Group Supervisor
Day Care Director
CDA Certification
Elementary Teacher
Special Education Teacher
Guidance Counselor



Health & Human Services



EMERGING HEALTH PROFESSIONALS

The Emerging Health Professions Program provides high school seniors with an opportunity to experience a variety of health care careers in a hospital setting and take Penn State science courses for college credit. Students spend three days a week rotating among various departments of a hospital. Students will experience these departments throughout the three Lehigh Valley Hospital & Health Network facilities.

The hospital portion of the program provides students with instruction in a variety of observation skills and hospital procedures, enabling them to participate in patient care activities during the clinical portion of the program. In addition to these basic skills, students are given an overview of the health care professions, different health care systems, health insurance and other health-related issues.

The solid foundation the program provides will assist its Emerging Health Professionals students who wish to pursue further education and professional careers.

This program requires an application evaluation and committee review.



Health & Human Services

FLORAL DESIGN / GREENHOUSE MANAGEMENT

In today's Floral Design/Greenhouse Management job market, there is a growing demand for experienced employment candidates who have business skills as well as horticultural knowledge. LCTI's Floral Design/Greenhouse Management Program gives students the opportunity to combine their creativity with a sense of business, service and fun. Students learn about growing, marketing and designing with flowers and plants.

In this program, students have a chance to gain work experience through internships and cooperative education opportunities with local florists and greenhouses and LCTI's Floral Shoppe.

Students are also taught Retail Flower Shop Selling, Plant Identification, Greenhouse Management, Plant Production, Propagation, Greenhouse Maintenance, Preparing Mediums and Mixes, Pest Management, and Environmental Control.

Students have a chance to gain work experience at functions such as The Allentown Flower Show, internships with local florists, and by working in greenhouses where they are teamed one-on-one with an experienced mentor.

This program is approved by the Lehigh Valley Florists Association and students may choose to enroll in post-secondary secondary education at area colleges and universities upon its completion.



EMPLOYMENT OPPORTUNITIES

Floral Designers
Greenhouse Managers
Crop Production Managers
Greenhouse Workers
Garden Center Associate
Floral Shops Sales Associate



Health & Human Services



HEALTH OCCUPATIONS / HEALTH RELATED TECHNOLOGY

The Health Occupations/Health Related Technology Program is for students interested in careers in the medical and rehabilitation fields. It provides students with the opportunity to learn about the various diversified health careers. The world of medicine and science changes and grows every day, and subsequently, the number of jobs in the health field grows as well.

Students learn about human anatomy, medical terminology, basic nutrition, patient care delivery and employability skills. As a Pennsylvania Department of Education OBRA approved nurse aide program, successful students are eligible to take the Pennsylvania Nurse Aide Competency Test. Additionally, the student has the opportunity to obtain his or her American Heart Association Basic Life Support CPR/AED Certificate as well as the First Aid Certificate.

Nurse Aide students learn basic nursing tasks which include Role and Function, Communication, Safety, Infection Control, Mental Health and Care of the Cognitively Impaired, Restorative Nursing Skills, and Personal Care Skills. Examples of hands-on skills include hand washing, measuring and recording temperature, pulse, respiration, blood pressure, and bandaging to name a few.

In the Medical Assistant/Medical Secretary portion of the course, students are responsible for both clerical and medical tasks. Skills include taking, relaying and charting messages; using the telephone and intercom; processing correspondence; dictation; transcription; billing and coding; overall management of patient records; hearing testing; phlebotomy and sterilization.

Certifications available include Pennsylvania Nurse Aide Registry, American Heart First Aid and CPR, and AED BLS Provider. Students will also be prepared to continue their studies at Lehigh Carbon Community College or a college or university of their choice.

EMPLOYMENT OPPORTUNITIES

Medical/Dental Assistant
Medical Technician's Aide
Hospital Records Clerk
Laboratory Aide
Physical Therapy Aide
Nursing Assistant
Recreation Therapy
Respiratory Aide
Occupation Therapy Aide



Health & Human Services



LAW ENFORCEMENT / SECURITY SYSTEMS

The Law Enforcement/Security Systems Program begins with the focus on Law Enforcement in Society. Students are taught the historical basis of the American criminal justice system and the place of law enforcement within the framework of that system. They examine the impact of constitutional guarantees on the performance of law enforcement and security personnel.

The program also covers Pennsylvania Criminal and Traffic Law. Students learn to differentiate between criminal and civil law, felonies, misdemeanors and summary offenses. They are expected to know the purpose of the Pennsylvania Crimes Code and utilize it to determine appropriate criminal infractions.

A portion of the course deals with the Legal Use of Force where students learn the elements of the "Use of Force Continuum," the difference between the use of force and the use of deadly force, and the basic principles of unarmed confrontation. Students can earn Incident Command System and National Incident Command System Certifications, Terrorist Awareness and Prevention Certification and TASER familiarization and security metal detector usage.

Upon successful completion of coursework, students can be certified in handcuffing, OC (pepper) spray use, baton use, first aid and CPR, dispatching, private security and corrections. Students will also be prepared to continue their studies at Lehigh Carbon Community College or a college or university of their choice.



Lehigh
Career & Technical
Institute

EMPLOYMENT OPPORTUNITIES

Retail Store Security

FBI

Home Security Specialist

Commercial Security

Security Sales

Police Officer

Probation Officer

Lawyer



Special Programs

CAREER ACADEMY PROGRAM

The Career Academy Program (CAP) provides at-risk students from the nine participating school districts with an alternative education which will help them receive a high school diploma and work toward a career goal in a program of choice.

LCTI instructors, teachers' assistants and a guidance counselor help CAP students develop skills vital to securing a job immediately after high school graduation. The program can also help students continue their education on a post-secondary level.

CAP students receive academic instruction in English (language and writing, American and World Literature, media studies, and humanities), mathematics (Algebra 1A, Algebra 2B, and Geometry/Trigonometry), social studies (American History and Government & Economics), science (surveys of biology, chemistry, physics, earth and space, and environmental sciences), health/wellness/physical education, computer applications, and career research. The week-long academic sessions are part of a three-week rotation process: one week of academic study followed by two consecutive weeks of career and technical education.

CAP career and technical programs include Auto Specialization Technology, Building Trades Maintenance, Carpentry, Early Care & Education of Young Children, Electrical Construction, Home Health Services, and Office Systems Technology.



Special Programs

AUTOMOTIVE SPECIALIZATION TECHNOLOGY

This program is designed to prepare students to service cars and light trucks. Students learn preventive maintenance, engine/chassis diagnosis and repair. They also learn to service and repair automotive drive trains, electrical systems, cooling systems, brakes, steering and suspensions, and perform general detailing and reconditioning on state-of-the-art manufacturer diagnostic equipment. Students have the option to obtain state inspection and emissions licenses.

BUILDING TRADES MAINTENANCE

Students in this program will have the opportunity to develop skills in carpentry, masonry, electrical wiring, plumbing, and painting. Students gain experience in both the classroom and through community service projects.

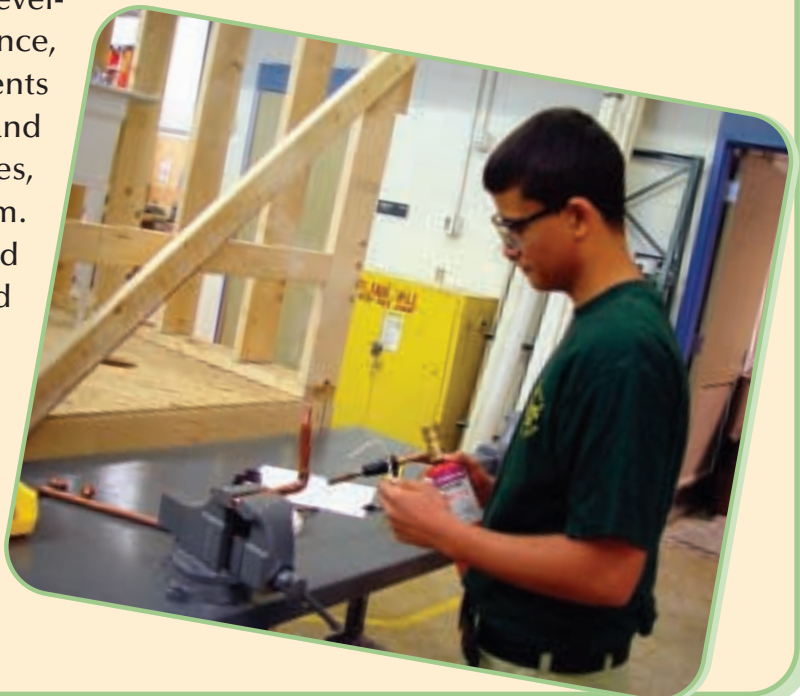
CARPENTRY

Students selecting this program will learn how the building industry operates, its standards and what is required to complete a project on time and at cost. Students will receive instruction in blueprint reading, site work, construction footing and framing, and insulating while participating in various community service projects.

EARLY CARE AND EDUCATION OF YOUNG CHILDREN

This program prepares students for employment in early childhood education and services for early childhood development.

Students will learn to plan and guide developmentally appropriate activities, guidance, and discipline for young children. Students will be exposed to the management and operation of licensed child care facilities, as well as a Head Start Program. Pennsylvania child care regulations and licensing requirements will be stressed within the curriculum.



Special Programs

ELECTRICAL CONSTRUCTION

Students in this program will learn residential, commercial, and industrial wiring, as well as telecommunications cabling. Students will be taught to install duplex and split wire receptacles, single pole switches, 3 and 4-way switches, and ground fault circuit interpreters in the classroom and through in various community service projects.

HOME HEALTH SERVICES

Students in this program will learn medical terminology, anatomy, physiology, and how certain diseases affect patients. Students will also be able to complete CPR and First Aide training, and prepare for the state board examinations for the nurse's aide certification as well as gaining home health aide experience.

OFFICE SYSTEMS TECHNOLOGY

Students in this program will study computer applications such as word processing, creating spreadsheets and databases, how to develop computer generated presentations and desktop publishing. Through office simulation activities students develop skills in office procedures such as filing, telephone technique, data entry, financial recordkeeping, proof-reading, and the operation of personal information management systems.



Special Programs

SERVICE OCCUPATIONS

Six curricular areas are offered in the Service Occupations program: Building Trades Maintenance, Custodial Maintenance, Grounds Maintenance and Landscaping, Food Service, Material Handling, and Hospitality Services. Each area is designed to help the student transition from basic entry-level skill development to more advanced technical training leading directly to the workforce. A skills assessment will be done to determine the readiness and interest of the student. Results of the assessment will be provided to the student's IEP team.

BUILDING TRADES MAINTENANCE

This program area introduces students to the carpentry, electrical, plumbing and masonry trades through class projects and guided practices. Work readiness and safety training are stressed in this program. After mastering basic competencies, students work on projects in the building and out in the community. Students work in various areas at the Lehigh Valley Zoo in conjunction with the zoo's staff to help maintain and beautify the site.

FOOD SERVICE

Students in this program will learn basic cooking techniques for restaurant and cafeteria services with an emphasis on food presentation and safety. Students are also trained in commercial laundry techniques, including the care and treatment of restaurant linens and professional uniforms. Students are required to complete and pass the OSHA Teen Workers Safety in Restaurants Assessment. The development of work readiness skills are stressed in this program to help prepare the student for a career in the food and restaurant industry. Advanced students work in the LCTI restaurant, the cafeteria, and the commercial dish room.

HOSPITALITY SERVICES

Students selecting this program will learn the necessary skills to prepare them to work in the hotel, fast food restaurant, café, and assisted living industries as a house person, breakfast attendant, hospitality worker, and/or laundry attendant. Students will practice their work experience skills while operating the school's hospitality cart which represents

room service in a hotel. Students will also maintain the LCTI fitness center, and operate residential and commercial laundry machines.

INDOOR/OUTDOOR MAINTENANCE/LANDSCAPING

Students in the program train for entry-level employment in the custodial field, and for positions as landscapers and groundskeeping laborers through hands-on training and skills preparation. Students are trained on a variety of equipment including floor/carpet equipment, mowers, trimmers and leaf blowers. Students are taught safety and health regulations, learn to plan their work, to interact positively with people, and to work independently on the school grounds and in the program's greenhouse.

MATERIAL HANDLING

Students in this program learn competencies in material handling while filling orders and delivering them within LCTI. They learn the safe use of tools and equipment, keyboarding, inventory, stock control, order picking and packaging. The newly completed distribution center will allow students to be exposed to state-of-the-art equipment and job practice, while developing readiness skills necessary to be successful in the logistics technology field. Advanced students receive merchandise and pack orders for LCTI's district members participating with the Lehigh County Joint Purchasing Board initiative and E-School Mall, and online ordering system.



Special Programs

MIDDLE COLLEGE / DUAL ENROLLMENT PROGRAM

Lehigh Career & Technical Institute and Lehigh Carbon Community College have created a dual enrollment program called "Middle College." It's designed for students who may or may not be sure whether they want to go to college once they've finished high school. The Middle College program will allow students to "test drive" the college experience while in high school. In fact, in just the last few years, hundreds of students have earned over 400 credits through the program.

Here's how the program works. Along with LCTI technical high school classes, college courses are taken during the junior and senior years. Classes are chosen which relate to the student's career pathway. A student can earn an entire semester's work of credits toward an Associate's or Bachelor's degree.

Each course credit at LCCC Middle College costs about half the regular tuition rate, less than one fourth of the cost of a comparable course credit at any one of Pennsylvania's state universities.

What's so special about LCCC Middle College?

The job market is incredibly competitive. Having more education will always help. More education will provide advanced placement in a career and adaptability to changing job markets. In fact, attending LCCC Middle College is like getting a 25-lap head start at the Indy 500 or a 10-yard head start in a 100-yard dash.

With Middle College post-high school education can be accelerated because of credits already earned during high school and can also boost your earnings potential.

Attending college takes time and money, but statistics show it's well worth the investment. According to the U.S. Census Bureau, workers with an Associate's degree will earn a 31 percent higher salary throughout their careers than high school graduates.

Special Programs

SCHOOL-TO-CAREER

School-To-Career coordinators take a student's educational path and enhance it with work-based opportunities through paid job experiences, internships and connections to business and industry through job shadowing and guest speakers. Eligible students may participate in one or more of these extended learning opportunities.

Summer internships between grades 11 and 12 are offered as a point of entry into high skill, high wage career pathways to students who meet the eligibility requirements. Successful completion of a summer internship program may allow students early entrance to a cooperative education placement in their senior year. Internships may be paid or unpaid work experiences.

The Cooperative Education Program (Co-op) allows students who have met eligibility requirements to enhance their learning by working in their chosen field, typically during their senior year. All work-based experiences are monitored by certified school-to-work coordinators. Employers provide a formal evaluation of the student's performance.

The Automotive Youth Educational System (AYES) is a program for students in the automotive industry. LCTI is certified by Automotive Service Excellence (ASE) to offer the AYES program in partnership with local employers.

The Accelerated Career Education System (ACES) allows LCTI students, in partnership with Lehigh Carbon Community College (LCCC), to earn up to 30 college credits toward an Associate of Applied Science degree. By combining academic and technical courses with worksite learning, students can earn a national skill certificate, credits toward a degree, and the opportunity for a high wage career.



Special Programs

DIVERSIFIED CAREER OCCUPATIONS (DCO)

LCTI offers the Diversified Career Occupations (DCO) Program to qualified students as an alternative method of earning credits toward graduation while gaining valuable work-place experience. The DCO program is delivered through a balanced combination of weekly classroom instruction and work-based experience, along with completion of weekly requirements. Students in 11th and 12th grade may be recommended by their high school guidance department to participate in the program.

Students traditionally work half days in entry-level positions. Jobs are in occupational areas that may not be offered at LCTI or at county high schools. Students work under the supervision of a work-site mentor who will share his or her expertise and provide training through an Occupational Training Plan. The employer is responsible to evaluate the student's performance on the job and to track attendance in the workplace.

An LCTI-certified coordinator is responsible to deliver related competency-based classroom instruction on a weekly basis at the student's high school and to conduct monthly visits with the student at their place of employment. Students will be formally evaluated and will receive a grade based on a combination of their workplace evaluation and their grade earned in classroom instruction.

DCO can benefit a variety of students, including those who have earned sufficient credits for graduation and may have free periods in their schedule. Work-based experience is a valuable tool to prepare for both full time employment and for post-secondary education.

DCO can assist students who may be considering withdrawing from school because of financial, domestic or scholastic challenges. Early workforce training in a supervised environment provides a solid basis for developing a positive work ethic and a pathway for future success in the workplace. DCO is also beneficial to local employers, providing an avenue to recruit new workers who will be prepared to accept the challenges of today's workforce.



Special Programs

ADULT EDUCATION

The Adult & Continuing Education Department of Lehigh Career & Technical Institute offers adult learners a variety of skills training programs both onsite and at various locations throughout the Greater Lehigh Valley.

Tractor Trailer Driver Training – CDL Class A and B

Heavy Equipment Operations

Heavy Equipment/CDL Transportation Services

Diesel Mechanic/CDL Transportation Services

Logistics & Forklift Safety Training/CDL
Transportation Services

Logistics & Forklift Safety Training

Industrial Lift Truck Technician

Electromechanical/Mechatronics Technology
Industrial Maintenance Training

PA State Inspection and Emissions Certification

Basic Chef Program

Day School Slot Purchase

(Full or half day sessions of all career & technical
programs)

Employee Assessments & Certifications

Customized Job Training

Specialty Courses

GED Test Center



For more information, please contact the Adult & Continuing Education Department at 610-799-1372 or visit us at www.lcti.org.





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