

COURSE CATALOG

2022-2023

2023-2024

2024-2025



LEARN BY DOING

Students learn in an environment which simulates the workplace with instructors who have many years of experience in their field. Upon graduation, students will have completed 1,485 hours of education and experience in their chosen career path. They are prepared to enter the workforce or continue their education for an advanced degree.

ECTS offers 18 Career Majors in 5 different career paths.

AUTOMOTIVE

Automotive Body Repair
Automotive Technology

COMMUNICATIONS

Art & Design for Business
Computer Networking
Computer Programming
Graphic Media & Design

CONSTRUCTION

Construction Trades
Facility Maintenance Technology

HUMAN SERVICES

Cosmetology
Culinary, Baking, & Pastry Arts
Early Childhood Education
Health Assistant
Hospitality Management & Tourism
Sports Therapy & Exercise Science

MANUFACTURING

Drafting & Design Engineering
Electrical Engineering Technology
Metal Fabrication Technology
Precision Machining Technology

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STUDENT INFORMATION

Plan for your future!

Typically, students apply to ECTS in their freshman year of high school to attend beginning their sophomore year. However, upper grade students who have chosen a career path offered at ECTS would benefit from attending and are welcome to apply.

What you need to know

- ECTS is tuition free. We are an extension of 11 Erie County School Districts.
- Students attend ECTS for half of their school day. The other half of the day is spent at the sending high school taking academic classes.
- Transportation is provided by the participating school district to and from ECTS for every student.
- Students attending ECTS participate in sports and activities offered at their high school.
- Students completing all 3 years of curriculum in their ECTS Career Major will have 1,485 hours of education, experience, and expertise.
- ECTS students take all levels of academic classes at their high school including honors and AP classes. Their schedule is tailored to match each individual student's gifts and talents.

HOW TO APPLY

Let's get started!

Freshmen visit ECTS in the fall. To apply, go to ects.org and select the application link. If you need assistance, see your School Counselor or call ECTS at 814-464-8600.

COOPERATIVE EDUCATION

Success starts at ECTS. Find your future!

ECTS students achieving good grades and attendance may have the opportunity to work in their Career Major, pending instructor approval, during their senior year. Students take their academic classes at the sending school then report to the worksite instead of attending ECTS. Students continue to learn on the job while being paid. There are typically nearly 100 seniors working each year. ECTS is continuously developing relationships with partners to provide employment opportunities.

CREDITS FOR YOUR HARD WORK

Many ECTS students pursue post-secondary options. ECTS has agreements with numerous universities, colleges, and post-secondary technical schools to offer students college credit for their ECTS education. The agreements for each Career Major can be found on our website www.ects.org.

A STEP AHEAD OF THE GAME

Students have the opportunity to earn industry-recognized certifications prior to graduation. A complete list of certifications aligned with each Career Major can be found on our website.

GET INVOLVED

Students have the opportunity to join career and technical organizations. Students will be encouraged to support the broader community through activities and projects.



SkillsUSA – This international organization for students in career and technical education is designed to teach leadership and entrepreneurial skills by competing in district, state and national competitions.

National Technical Honor Society – Students inducted into the National Technical Honor Society celebrate their academic efforts along with their technical skills. Students are nominated by their instructors for membership into the National Technical Honor Society. Students are recognized for their academic, technical, and leadership qualities. NTHS members organize and lead multiple ECTS service projects.



Community Service – ECTS strives to make our community a better place! Our students have the opportunity to support their community throughout the school year. Individual career majors highlight technical skills by engaging in specialized community projects.

Advanced Training Day – Our students experience a college/job fair while on campus. Post-secondary universities, technical schools, community colleges, businesses, and industries send representatives to engage in critical conversations about opportunities after ECTS.

Apprenticeship/Military Day – ECTS hosts an Apprenticeship Panel Day and a Military Panel Day where students participate in discussions with representatives about the variety of opportunities each have to offer.

Shadow Experiences – ECTS offers our students hands-on experiences as well as experiences outside the building. Students can fulfill job-shadowing requirements by visiting local businesses that highlight careers linking school to work.

A close-up photograph of a hand holding a silver spray gun. The gun is spraying a fine mist of paint onto a red car body part. The background is a blurred red surface, likely the car's body. The spray gun has a black cap and gold-colored accents.

AUTOMOTIVE BODY REPAIR

PUTTING YOUR RIDE BACK ON THE ROAD

In **Automotive Body Repair** you will experience taking a vehicle from old to new again. Vehicles are very expensive and complex. Keeping them looking sharp and repairing damage done to the body is essential to the life of the vehicle. You will learn the advanced techniques of taping, sanding, welding, and painting to bring a vehicle back to life. You will learn to create your own designs to make a vehicle stand out!

Did you KNOW?

It takes almost 7 years of color research and testing to make the paint color and color name of a new car showroom ready.

There are over 60,000 auto body paint and repair shops in the United States.

CAREER FOCUS

Prepared to enter the workforce or continue education.

CERTIFICATION OPPORTUNITIES

S/P2 in Collision Safety
S/P2 in Pollution Prevention
Pennsylvania State Inspection License
Pennsylvania State Emissions License

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 11
- The math level includes higher order of operations and computations and measurement

WHAT GENERAL SKILLS ARE REQUIRED IN AUTOMOTIVE BODY REPAIR?

- Students in Auto Body Repair should enjoy working on vehicles, be able to meet deadlines, and be customer service orientated
- Good hand-eye coordination, manual dexterity, multi-limb coordination, mechanical aptitude, physical strength, and accuracy
- Great attention to details
- The ability to work with minimal supervision

WHERE DO PEOPLE IN AUTOMOTIVE BODY REPAIR WORK?

People with a background in Automotive Body Repair work in auto detailing and body repair shops as well car dealerships. They become detailers, master painters, and often open their own business. People with a strong talent in Automotive Body Repair also work on customized vehicle paint jobs.

WHAT WILL YOU LEARN IN AUTOMOTIVE BODY REPAIR?

LEVEL 1

- MIG Welding Equipment and Technology
- Vehicle Surface Preparation and Masking
- Body Filler Applications
- Compressed Air System Technology

LEVEL 2

- Damage Appraisal
- Refinishing Procedures
- Hood, Bumper, Fender, Lid, and Trim Services
- Door, Roof, and Glass Services

LEVEL 3

- Uni-body Frame Realignment
- Body/Frame Damage Measurement
- Electrical/Electronic System Operations and Service
- Paint Problems and Final Detailing

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



AUTOMOTIVE TECHNOLOGY

KEEPING YOUR WHEELS ON THE ROAD

Do you love working on cars, trucks, motorcycles? It is an exciting time to be an auto technician. Vehicles are becoming very complex and today's automotive technicians need to be highly trained to work on them. You may be qualified to work for a car dealership by the end of 11th Grade and can graduate with your Pennsylvania State Inspection License. Let your love for vehicles drive your future in **Automotive Technology**.

Did you KNOW?

The average car has over 30,000 different parts.

The new car smell is produced by over 50 volatile organic compounds.

CAREER FOCUS

Prepared to enter the workforce or continue education.

CERTIFICATION OPPORTUNITIES

PA State Emissions Certification
PA State Inspection Certification
S/P2 Auto Shop Mechanical Safety
S/P2 Mechanical Pollution Prevention
Hazardous Materials Handling

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 11
- The math level includes higher order of operations and computations and measurement

WHAT GENERAL SKILLS ARE REQUIRED IN AUTOMOTIVE TECHNOLOGY?

- Students in Automotive Technology should enjoy working on vehicles, be able to meet deadlines, and be customer service orientated
- Good hand-eye coordination, manual dexterity, multi-limb coordination, mechanical aptitude, physical strength, and accuracy
- Great attention to details
- The ability to work with minimal supervision

WHERE DO PEOPLE IN AUTOMOTIVE TECHNOLOGY WORK?

People with a background in Automotive Technology work as automotive technicians, technician assistants, parts suppliers, and parts sales representatives. They work for dealerships, independent garages, and open their own automotive businesses.

WHAT WILL YOU LEARN IN AUTOMOTIVE TECHNOLOGY?

LEVEL 1

- Basic Automotive Electricity
- Wheels, Tires, Bearings
- Shop Safety

LEVEL 2

- Brake Systems Diagnosis and Repair
- A.B.S. and Traction Control Systems
- Suspension and Steering Diagnosis and Repair
- Vehicle Drive Trains

LEVEL 3

- Hybrid and Electric Drive
- Engine Tune-Up and Drivability
- Emissions Systems Diagnosis
- PA State Safety Inspection

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



ART & DESIGN FOR BUSINESS

COLOR OUTSIDE THE LINES

Look around you. Art is everywhere! If you have talent, **Art & Design for Business** allows you to develop that talent into a creative career. Students develop a portfolio to include drawing, illustrating, photography, videography, and Photoshop. They work with state-of-the-art computer programs to create digital pieces of work. Students use their portfolios to showcase their talents for entry into an accredited art school or workforce.

Students learn to work with deadlines, an important skill in working with customers. They use their talent and passion to create what the customer wants.

Did you KNOW?

*Before he
learned to walk,
Picasso could
draw. The first
word he spoke
was the Spanish
word for pencil.*

*Painting the
Mona Lisa's lips
took Leonardo
da Vinci 12
years! Only the
lips!*

CAREER FOCUS

Prepared to enter the workforce as an entry-level artist or designer or attend a post-secondary school in the field of Multimedia Design.

CERTIFICATION OPPORTUNITIES

OSHA 10-Hour Safety

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 10
- Students need to be successful in the math areas of geometry, measurement, and computation

WHAT GENERAL SKILLS ARE REQUIRED IN ART & DESIGN FOR BUSINESS?

- Creative and computer savvy
- Talent in and passion for art
- Attention to detail
- Ability to work with deadlines and under pressure
- Ability to effectively communicate and understand the needs of the customer

WHERE DO PEOPLE IN ART & DESIGN FOR BUSINESS WORK?

People with a background in Art Design work as web designers, graphic artists, photographers, illustrators, and in the field of marketing. Art is everywhere we look. The possibilities to make the world beautiful are endless!

WHAT WILL YOU LEARN IN ART & DESIGN FOR BUSINESS?

LEVEL 1

- Drawing and Studio Fundamentals
- Adobe Illustrator
- Elements and Principles of Design
- Adobe Photoshop

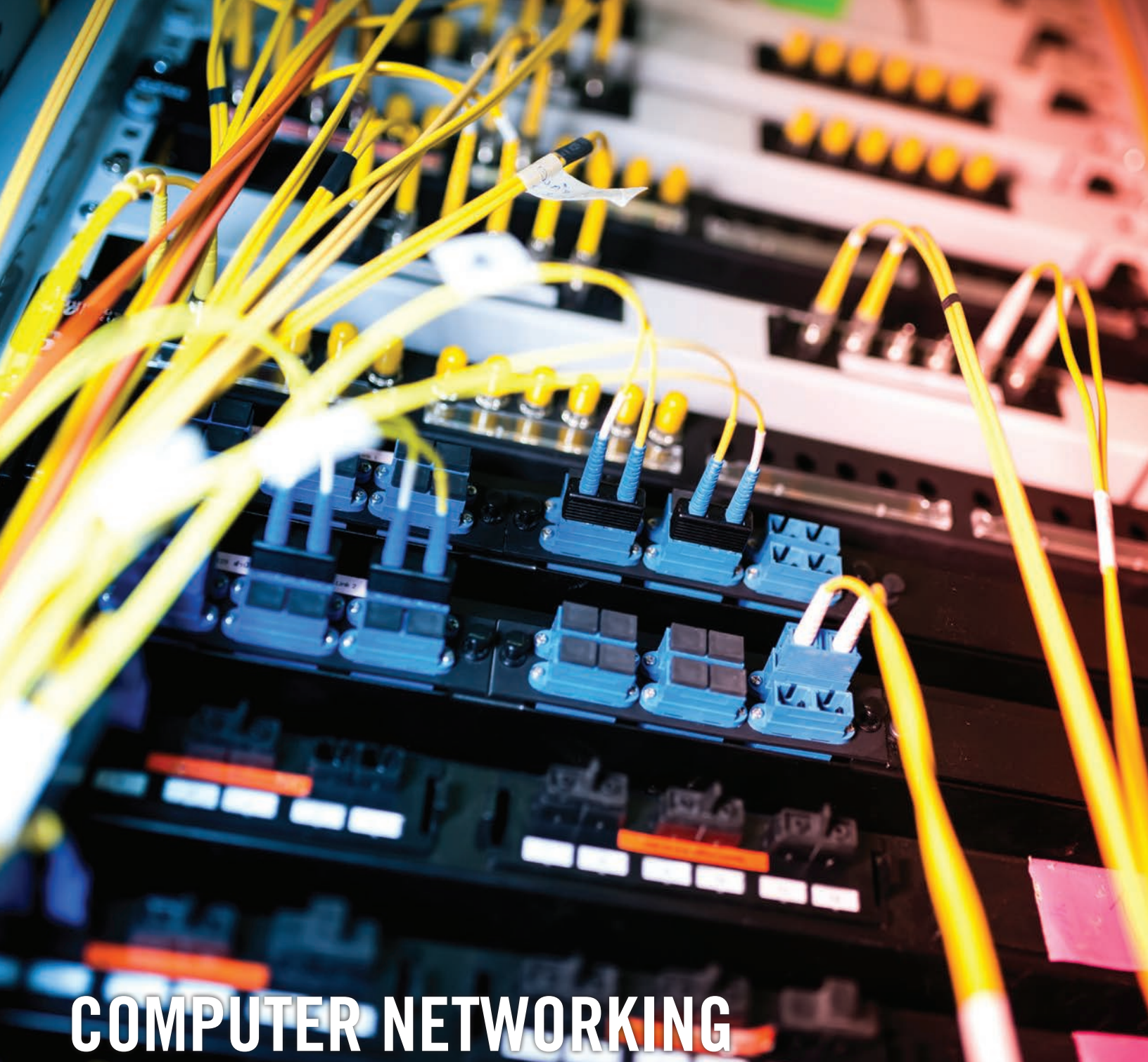
LEVEL 2

- Advertising and Design
- Client Project Design
- Brand and Package Design
- Drawing

LEVEL 3

- Design for Print
- Introduction to Web Design
- The Business of Design
- Multimedia Design

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



COMPUTER NETWORKING

BE A PART OF IT

For the world we live in to function, we need people who understand how to build, wire, repair, and secure computers. We use computers in our daily lives without even thinking about it. Think about how we listen to music, do our banking, drive our vehicle, and check out at the grocery store or restaurant. All require computers. Technology is only going to become faster and more necessary to live our daily lives. Keeping our information and the grids we live on secure is vital to our own security and the security of our country.

Having a **Computer Networking** education opens doors to endless career possibilities. Some of those career opportunities do not even exist yet!

Did you KNOW?

Besides being IT companies Google, HP and Microsoft have one thing in common. They were all started in a garage.

Over 600 new computer viruses are released each month.

CAREER FOCUS

Prepared to enter the workforce as an entry-level IT professional or continue post-secondary education for an advanced degree and certifications.

CERTIFICATION OPPORTUNITIES

Network + Certification
OSHA 10-Hour Safety

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 10
- Students need to be strong in the math areas of algebra, problem solving, and probability

WHAT GENERAL SKILLS ARE REQUIRED IN COMPUTER NETWORKING?

- Problem solve and troubleshoot issues
- Configure networking systems
- Attention to detail
- Work with deadlines and under pressure
- Effectively communicate and understand the needs of the customer

WHERE DO PEOPLE IN COMPUTER NETWORKING WORK?

People with a background in Computer Networking work anywhere and everywhere! Every company and business employs IT people to keep their network running and secure. They work in businesses, schools, hospitals, cable companies, manufacturing plants, event centers...the possibilities are truly endless.

WHAT WILL YOU LEARN IN COMPUTER NETWORKING?

LEVEL 1

- Overview of PC Components
- Troubleshooting Skills and Procedures
- Networking Fundamentals
- Wired and Wireless Network Media

LEVEL 2

- General Security Strategies
- Console-Based Switching and Routing
- Server and Network Virtualization
- Computer Forensics and Response

LEVEL 3

- Web-Based Switching and Routing
- Back-up Recovery Techniques
- Network Plan, Design, and Implementation
- Industry Certification Preparation

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



COMPUTER PROGRAMMING

CREATING APPS FOR THAT

Are you interested in creating computer programs, games and apps by learning to write code? Every industry has a need for computer programmers. The demand is great and so are the opportunities. If you love computers and want to learn program code, **Computer Programming** will give you the fundamentals in a variety of coding languages. You will gain the skills to create your own programs and go on to major in any computer related field. ECTS will put you on the path to creating the next great app!

Did you KNOW?

Computers operate in a binary code. All software is written using 0 or 1. There are infinite combinations of these two digits. New software can be written all the time.

In the United States there are over 750 different languages spoken. Coding has over 700 languages in use today.

CAREER FOCUS

Prepared to enter the workforce or post-secondary education in any computer related major.

CERTIFICATION OPPORTUNITIES

CareerSafe Safety Awareness Certificate

ACADEMIC CONSIDERATIONS FOR SUCCESS

- Students should have math skills up to Grade 11 to include reasoning and numbers
- The reading level is Grade 10

WHAT GENERAL SKILLS ARE REQUIRED IN COMPUTER PROGRAMMING?

- Excellent problem-solving skills
- Can work independently or as part of a team
- Understand how computers work
- Interested in coding and learning computer languages

WHERE DO PEOPLE IN COMPUTER PROGRAMMING WORK?

People with a Computer Programming background work for businesses as computer programmers, web page developers, computer applications specialists, and computer consultants. In the ever-changing world of technology the possibilities with a computer programming education are endless.

WHAT WILL YOU LEARN IN COMPUTER PROGRAMMING?

LEVEL 1

- Visual Basic
- Flow Charting
- Documentation
- Data Management

LEVEL 2

- Web Development
- Design Principles
- MySQL
- HTML & Javascript

LEVEL 3

- Java
- Microsoft SQL
- Safety & Security
- Business Solutions

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



GRAPHIC MEDIA & DESIGN

MAKING GREAT IMPRESSIONS

Graphic Media & Design is the foundation for all printed material, websites, social media marketing, and video games. Students choosing the graphics career path are very creative, have great communication skills, pay close attention to detail, and enjoy creating unique designs. Graphic Media & Design students listen to clients' needs and create a visual design around an idea. They see the process from conceptual beginnings to the finished product.

Did you KNOW?

*The brain
processes visual
information
60,000 times
faster than words.*

*The Nike Logo
was created by
a graphic design
student in 1971
for \$35.*

CAREER FOCUS

Prepared to enter the workforce as an entry-level graphic designer or printer, and pursue a post-secondary degree.

CERTIFICATION OPPORTUNITIES

OSHA 10-Hour Safety

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 10
- Proficient in measuring and basic math operations

WHAT GENERAL SKILLS ARE REQUIRED IN GRAPHIC MEDIA & DESIGN?

- Students in Graphic Media & Design should enjoy creating images on a computer
- Creative and talented in art
- Computer savvy
- Interest in photography
- Attention to detail
- Work under pressure to meet deadlines
- Effectively communicate and support the needs of the customer

WHERE DO PEOPLE IN GRAPHIC MEDIA & DESIGN WORK?

People with a background in Graphic Media & Design become graphic designers, social media developers, web page developers, photographers, press operators (traditional and digital), animators, and many other design, print, and media-focused professionals. Graphics are everywhere we look!

WHAT WILL YOU LEARN IN GRAPHIC MEDIA & DESIGN?

LEVEL 1

- Introduction to Adobe Create Suite, InDesign, Photoshop, and Illustrator
- Press Operations
- Design and Layout
- Typography

LEVEL 2

- Digital Photography
- Ink Science/Mixing
- Printing Processes
- Applied Adobe InDesign, Photoshop, and Illustrator

LEVEL 3

- Digital Image Capture
- Electronic Pre-press/Digital Printing
- Press Operations
- Graphic Media & Design Careers

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



CONSTRUCTION TRADES

MEASURING UP! BUILDING YOUR FUTURE

Do you enjoy building things? Are you interested in working with tools, cutting, measuring, and creating structures? In **Construction Trades**, you will learn to build complete structures from the foundation to the roof. You will install windows, staircases, flooring, siding, and roofing for all types of buildings.

If you are curious about creating structures from start to finish, start building your career in Construction Trades!

Did you KNOW?

The Hoover Dam could take you from California to the New York City. The 3,250,000 cubic yards of concrete used in the construction of the Hoover Dam would be enough to build a two-lane highway over the nearly 3,000 mile stretch of land between San Francisco and New York City.

The most expensive city in the United States to build in is San Francisco.

90% of general contractors are worried about a labor shortage in the construction industry.

CAREER FOCUS

Prepared for immediate employment, apprenticeships, and further education.

CERTIFICATION OPPORTUNITIES

OSHA 10-Hour Construction Industry Certification
Ladder Safety Certifications

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 9
- The math level includes measurement, computation, and problem solving

WHAT GENERAL SKILLS ARE REQUIRED IN CONSTRUCTION TRADES?

- Students in Construction Trades should enjoy working with their hands, being outside regardless of the weather, and enjoy seeing a project completed from start to finish
- Attention to detail, particularly in measuring
- Excellent problem-solving ability
- Physical ability to work with power tools, climb, and move heavy objects
- Strong communication skills to work with customers and the building team
- Willingness to work as part of a team

WHERE DO PEOPLE IN CONSTRUCTION TRADES WORK?

People with a background in Construction Trades work as carpenter apprentices, drywall installers, roofers, block and brick layers, and building supply salespersons. They often go on to own a construction or remodeling company.

WHAT WILL YOU LEARN IN CONSTRUCTION TRADES?

LEVEL 1

- Masonry Tools and Equipment
- Construction Hand and Power Tools
- Blueprint Reading and Specifications
- Basic Framing Techniques

LEVEL 2

- Site Preparation and Layout
- Fundamentals of Flooring
- Gable Roof Construction
- Hip Roof Construction

LEVEL 3

- Advanced Foundations and Floor Framing
- Applied Exterior Wall Framing
- Applied Roof Framing
- Installation of Soffit and Fascia

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



FACILITY MAINTENANCE TECHNOLOGY

KEEPING BUILDING SYSTEMS RUNNING

In **Facility Maintenance Technology**, you will learn how to keep buildings operational by supporting plumbing, electricity, machining and machinery repair, welding, basic carpentry and HVAC. When something is not working, needs replaced or repaired, the Facility Maintenance Technician comes to the rescue.

Did you KNOW?

About 1.3 million people currently work as general maintenance workers, with 302,000 working in the real estate sector.

Repairing structural damage costs an average of four times more than the cost of routine building maintenance.

CAREER FOCUS

Prepared for immediate employment, apprenticeships, and further education.

CERTIFICATION OPPORTUNITIES

OSHA 10-Hour Safety
Ladder Safety Certification

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 10
- The math level includes measurement, computation, and problem solving

WHAT GENERAL SKILLS ARE REQUIRED IN FACILITY MAINTENANCE TECHNOLOGY?

- Students in Facility Maintenance Technology should enjoy doing a variety of different jobs and be able to communicate well
- Excellent problem-solving ability
- Desire to work in a fast-paced environment
- Attention to detail
- Mechanical and construction aptitude
- Use of hand and power tools
- Understanding of building systems

WHERE DO PEOPLE IN FACILITY MAINTENANCE TECHNOLOGY WORK?

Anywhere and everywhere! People with a background in Facility Maintenance Technology work with electricity, plumbing, HVAC systems, and anything related to maintaining building systems or machinery. They work in schools, hospitals, office buildings, and any other facilities people work in. They also work on the infrastructure that keep our communities functioning. Every home, building, machine, and public infrastructure require maintenance and repairs.

WHAT WILL YOU LEARN IN FACILITY MAINTENANCE TECHNOLOGY?

LEVEL 1

- Basic Carpentry
- Electrical Lab Applications
- Introduction to National Electrical Code
- Basic Plumbing

LEVEL 2

- Construction Fundamentals
- Advanced Plumbing
- Commercial and Industrial Wiring
- Property Maintenance

LEVEL 3

- Electric Motor Control
- Industrial Hydraulics
- Basic HVAC
- Basic Sheet Metal and Metal Working

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



COSMETOLOGY

INSPIRING GREAT LOOKS FROM HEAD TO TOE

Cosmetology is a fast-growing industry with a great demand for talented people. Cosmetologists blend art and science to create beautiful results. In Cosmetology you can graduate with your Pennsylvania State Cosmetology License and be ready for a career working with hair, nails, makeup and skin care. The beautiful world of Cosmetology brings out the beauty in others. Bring your inner beauty to Cosmetology.

Did you KNOW?

The beauty industry is worth over \$511 billion worldwide and is growing at an average of 7% per year.

Cosmetologists need to be creative and have an understanding of chemistry and human anatomy. They combine art and science.

CAREER FOCUS

Prepared to enter the workforce or continue education.

CERTIFICATION OPPORTUNITIES

Cosmetology Operator License
SP2 Cosmetology Certifications

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading level in Cosmetology is Grade 10
- The math level includes measurement, computation, and problem solving
- Chemistry and biology are scientific components of Cosmetology

WHAT GENERAL SKILLS ARE REQUIRED IN COSMETOLOGY?

- Students need to enjoy working with people, be creative, and good communicators
- Good at listening to the needs and desires of customers
- Good communication skills to make customers feel comfortable and have a full understanding of the service being provided
- Understand the science involved with the services provided

WHERE DO PEOPLE IN COSMETOLOGY WORK?

People with a Cosmetology license enter the vast field of beauty in hair care, nails, skin care, and makeup. They become hair stylists, skin estheticians, makeup artists, and nail technicians. They can own their own business or work in an endless possibility of industries.

WHAT WILL YOU LEARN IN COSMETOLOGY?

LEVEL 1

- Bacteriology/Infection Control
- State Law
- Chemistry and Electricity
- Principles in Hair Design

LEVEL 2

- Haircutting
- Hairstyling
- Hair Coloring
- Chemical Texture Services

LEVEL 3

- Facials/Makeup/Hair Removal
- Nail Structure/Growth
- The Salon Business
- State Exam Preparation

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



CULINARY, BAKING, & PASTRY ARTS

SERVING UP THE FLAVORS OF LIFE

In **Culinary, Baking, & Pastry Arts** you will be part artist, part scientist. Culinary combines the science of mixing ingredients with the art of presentation. Food is love! If you enjoy cooking and baking, you will learn to turn that passion into a career such as chef, pastry chef, caterer, event planner, and restaurant manager or owner.

Did you KNOW?

The Yale culinary tablets are the oldest cookbooks in the world.

Dating back to 1700 B.C., these Mesopotamian tablets display the oldest recipes. According to experts, the dishes are meant to be served for royalty. They recovered 25 recipes for stew, mostly meat-based with a few vegetable varieties. However, the recipes merely listed ingredients without any directions. Recipes for pastries were also found in the tablets.

July 25th is National Culinarians Day to honor chefs and those that prepare the food we love.

CAREER FOCUS

Prepared to enter the workforce or attend a post-secondary culinary school.

CERTIFICATION OPPORTUNITIES

National Food Safety Manager Certification
American Culinary Federation Foundation Skills Certification
RAMP Certification (Responsible Alcohol Management Program)
SP2 Culinary

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 9
- The math level includes operations that involve fractions and decimals

WHAT GENERAL SKILLS ARE REQUIRED IN CULINARY, BAKING, & PASTRY ARTS?

- Students in Culinary, Baking, and Pastry Arts should enjoy creating experiences with food, working with people, and be able to meet the demands of working for many hours on their feet
- Desire to prepare and present food
- Excellent problem-solving ability
- Ability and desire to work in a fast-paced environment
- Attention to detail
- Friendly, outgoing, and willing to be part of a team

WHERE DO PEOPLE IN CULINARY, BAKING, & PASTRY ARTS WORK?

People with a background in culinary, work in restaurants, bakeries, cafes, hotels, resorts, cruise ships, food trucks and any place you can think of that serves food. The opportunities in the culinary career path are endless.

WHAT WILL YOU LEARN IN CULINARY, BAKING, & PASTRY ARTS?

LEVEL 1

- Culinary Basic Skills and Nutrition
- Breakfast, Meat, and Poultry Cookery
- Safety and Sanitation
- Garde Manager Preparation

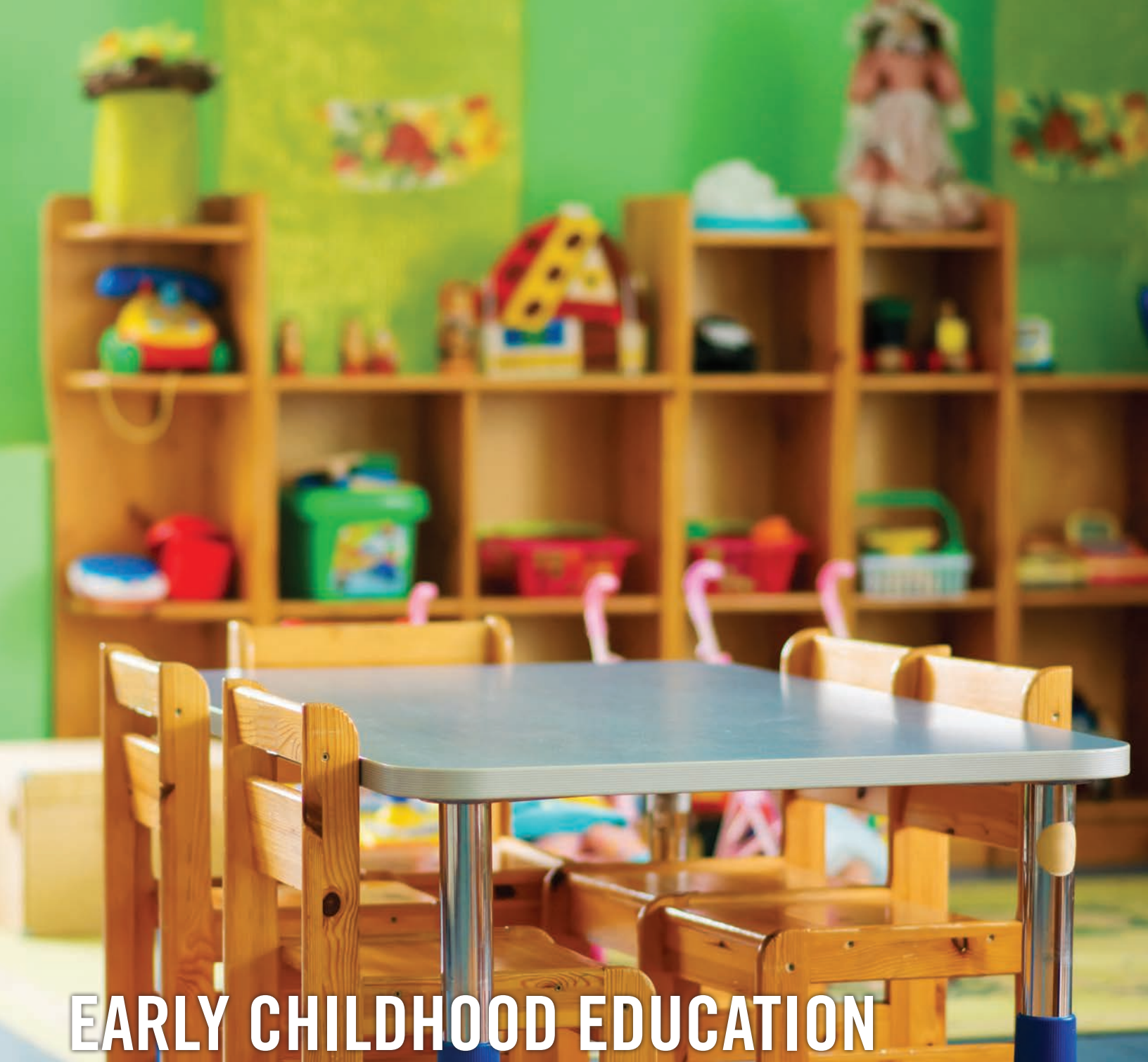
LEVEL 2

- Pies and Pastries
- Bread, Cookies, and Cakes
- Advanced Baking
- Menu Planning

LEVEL 3

- Dessert Preparation
- Wine Appreciation and RAMP Certification
- Restaurant Management
- Specialty Foods

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



EARLY CHILDHOOD EDUCATION

TURNING CHILD'S PLAY INTO LEARNING

Do you enjoy being with children? Research shows that a quality education in a child's early years prepares them for success in life. In **Early Childhood Education**, you will learn the skills of working with children to prepare them for school. You will graduate with the experience needed to work in a daycare or preschool or you can head to college to become a teacher. ECTS operates a preschool for children in the community and provide ECTS Early Childhood students with real experience in working with children. Help change the world by helping children learn and grow in Early Childhood Education!

Did you KNOW?

A toddler between the ages of 1 and 2 years, will gain 2 million new brain connections every second. At 2 years of age, a child has more than 100 trillion new brain connections, or synapses. However, when a child finally becomes an adult, more than 50% of these acquired synapses disappear.

Mister Roger's first PBS show aired in 1968. He developed the show because he disliked television but felt the innovative tool could be used to help children build self-esteem, conquer their fears, and love others. Mister Rogers' Neighborhood was on air for 33 years and holds the record for the longest-running program on public television.

CAREER FOCUS

Prepared to enter the workforce or continue education.

CERTIFICATION OPPORTUNITIES

National Food Safety Manager Certification
CDA Certification (Child Development Associate)
First Aid/CPR
OSHA 10-Hour Safety

ACADEMIC CONSIDERATIONS FOR SUCCESS

- Students should have math skills to include measuring, graphing, and comparing
- The reading level is Grade 9

WHAT GENERAL SKILLS ARE REQUIRED IN EARLY CHILDHOOD EDUCATION?

- Students should enjoy working with children
- Enjoy working in a lively environment
- Creative and enjoy developing fun activities to guide children to learn and grow intellectually, socially, and emotionally
- Patient, kind, and committed to helping every child in their care or classroom meet their fullest potential

WHERE DO PEOPLE IN EARLY CHILDHOOD WORK?

People with training in Early Childhood Education work in child care centers or preschools. They may also work in a variety of community programs for young children, including social work and counseling. People who go on to earn a degree related to Early Childhood Education may teach at the preschool through elementary grade level and may pursue further college training in special education.

WHAT WILL YOU LEARN IN EARLY CHILDHOOD EDUCATION?

LEVEL 1

- Early Childhood Regulations and Standards
- Nutrition in Child Care Setting
- Preparing and Serving Foods
- Disease Control and Child Abuse

LEVEL 2

- Learning Experiences – Science, Art, Language, Social Studies, and Math
- Children's Literature
- Emotional Health of Children
- Children with Special Needs or Challenging Behaviors

LEVEL 3

- Developing Unit Plans and Lessons
- Preschool Operations
- Pediatric First Aid Training
- Diversity in the Classroom

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



HEALTH ASSISTANT

INSPIRING HEALTHY LIFESTYLES

People are living longer, healthier lives thanks to the rapidly growing field of health care. You can choose from a variety of careers in the field. Do you enjoy helping people? Are you compassionate? Do you love science? Are you fascinated by the human body? Let your compassion and curiosity guide your career in **Health Assistant**.

Did you KNOW?

The heart pumps about 1 million barrels of blood during an average lifetime. That is enough to fill 2 oil super tankers.

About 70% of the human body is made up of water.

The nose is our personal air HVAC system. It warms, cools, and filters impurities.

The human body is truly amazing!

CAREER FOCUS

Prepared to enter the workforce or post-secondary education.

CERTIFICATION OPPORTUNITIES

Provisional Certified EKG Technician
OSHA Health Safety Certification
National Food Safety Manager Certification
First Aid and CPR

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 11
- The math skills include computation, measurement, and statistics

WHAT GENERAL SKILLS ARE REQUIRED IN HEALTH ASSISTANT?

- Students should have a high interest in science and the medical field
- Students in Health Assistant should enjoy working with and caring for people
- Ability to handle emergency and stressful situations
- Excellent problem-solving ability
- Ability and desire to work in a fast-paced environment
- Attention to detail
- Excellent communication skills
- Compassion

WHERE DO PEOPLE IN HEALTH ASSISTANT WORK?

With a strong foundation in the Health Assistant program and further training, people become medical receptionists, office assistants, medical technicians, or phlebotomists. They are also prepared to go on to school to become an LPN, RN, physical or respiratory therapist, or physician assistant. They work in a variety of medical facilities including hospitals, doctor offices, medical laboratories, rehabilitation facilities, and long-term care facilities.

WHAT WILL YOU LEARN IN HEALTH ASSISTANT?

LEVEL 1

- Introduction to Anatomy and Physiology
- Skeletal System
- Cancer and Abnormalities
- Cardiovascular System

LEVEL 2

- Geriatric Care
- Patient Care
- Body Mechanics and Ergonomics
- Vital Signs

LEVEL 3

- Medical Ethics and Documentation
- Infection Control
- Physical Therapy
- Pharmacology

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



RECEPTION

HOSPITALITY MANAGEMENT & TOURISM

MAKING THE MOST OF YOUR VISIT

In **Hospitality Management & Tourism**, the world is your classroom! You will be prepared to pursue a career as an event planner, manager (general, assistant, front of house), guest service employee, or a multitude of other positions in the industry. The foundation of Hospitality Management & Tourism is based on business principles in marketing, sales, inventory control, purchasing, costing, human resources, and management. Students learn the models used in successful businesses, while working in a real-world classroom. This experience takes place at venues in the Erie area several days a week. The classroom is outside the school walls where the hospitality and tourism action happens!

Did you KNOW?

Presque Isle beaches in Erie, PA have over 4.2 million tourists a year, making it one of the most visited spots in the state. These visitors generate a great amount of tourism and money for Erie and the surrounding areas.

1 of every 8 jobs in the United States depends on travel and tourism.

CAREER FOCUS

Prepared to enter the workforce or pursue a post-secondary degree.

CERTIFICATION OPPORTUNITIES

American Hotel and Lodging Association Certificates
National Food Safety Manager Certification
RAMP (Responsible Alcohol Management Program)
OSHA 10-Hour General Industry Certification

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 11
- The math skills include computation, problem solving, and probability

WHAT GENERAL SKILLS ARE REQUIRED IN HOSPITALITY MANAGEMENT & TOURISM?

- Students in Hospitality Management & Tourism should enjoy working with people
- Excellent problem-solving ability
- Ability and desire to work in a fast-paced environment
- Attention to detail and creativity
- Friendly, outgoing, and willing to be part of a team

WHERE DO PEOPLE IN HOSPITALITY MANAGEMENT & TOURISM WORK?

People with a background in Hospitality Management & Tourism work in hotels, restaurants, theme parks, cruise ships, stadiums, sports arenas, and venues that hold specialty events. They also become event planners and explore business opportunities in areas such as management, sales, and marketing. This is a world-wide industry!

WHAT WILL YOU LEARN IN HOSPITALITY MANAGEMENT & TOURISM?

LEVEL 1

- Guest Experience Cycle
- Front Office Operations
- Sales and Marketing
- Food and Beverage Services

LEVEL 2

- Hospitality and Tourism Leadership
- Managing the Guest Experience
- Managing Housekeeping Operations
- Food Safety and Sanitation

LEVEL 3

- Leadership and Facilities Management
- Human Resources
- Managing Operational Finance
- Virtual Business Hotel Management

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



SPORTS THERAPY & EXERCISE SCIENCE

LIVING YOUR BEST LIFE

Do you enjoy helping people? Are you interested in physical therapy, exercise, and nutrition? Sports therapy and related rehabilitation programs help people of all ages live active lives. You can choose from a variety of careers in rehabilitative care. You will learn assessment, treatment, and injury prevention techniques. After completing the **Sports Therapy & Exercise Science** major, you will be prepared to become a physical therapy aide, fitness trainer, rehabilitation aide, or to enter a variety of other areas of rehabilitative health care. Let your compassion guide your career in the Sports Therapy & Exercise Science major!

Did you KNOW?

Techniques used in physical therapy today can be traced back thousands of years. It is believed that many of the techniques and methods used in physical therapy today go back to famed Greek philosopher Hippocrates and, later, Galen. Both were advocates for the use of massage and hydrotherapy dating as far back as 460 BC.

The profession began as a female-dominated field. The first professional organization of physical therapy was called the American Women's Physical Therapeutic Association. Now, the profession is a mix of males and females.

CAREER FOCUS

Prepared for the workforce or post-secondary education.

CERTIFICATION OPPORTUNITIES

CPR and First Aid
OSHA 10 Health Care Safety
ConcussionWise Certification
Personal Trainer Certification
Stop the Bleed

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension and math level is Grade 11
- The math skills include computation, measurement, and statistics

WHAT GENERAL SKILLS ARE REQUIRED IN SPORTS THERAPY & EXERCISE SCIENCE?

- Students should have a high interest in science and the medical field
- They should be compassionate and enjoy working with people
- It is also important to have excellent study skills and the ability to memorize material
- Physical strength to assist people with their mobility and stamina to be moving all day long
- Ability and desire to work in a fast-paced environment
- Attention to detail
- Excellent communication skills

WHERE DO PEOPLE IN SPORTS THERAPY AND EXERCISE SCIENCE WORK?

People in the field of Sports Therapy and Exercise Science become rehabilitative therapy aids and assistants, massage therapists, personal and athletic trainers or dietitians. People work in the fields of speech, occupational, and recreational therapy.

WHAT WILL YOU LEARN IN SPORTS THERAPY AND EXERCISE SCIENCE?

LEVEL 1

- Anatomy and Physiology
- Infection Control
- Medical Terminology
- Body Systems

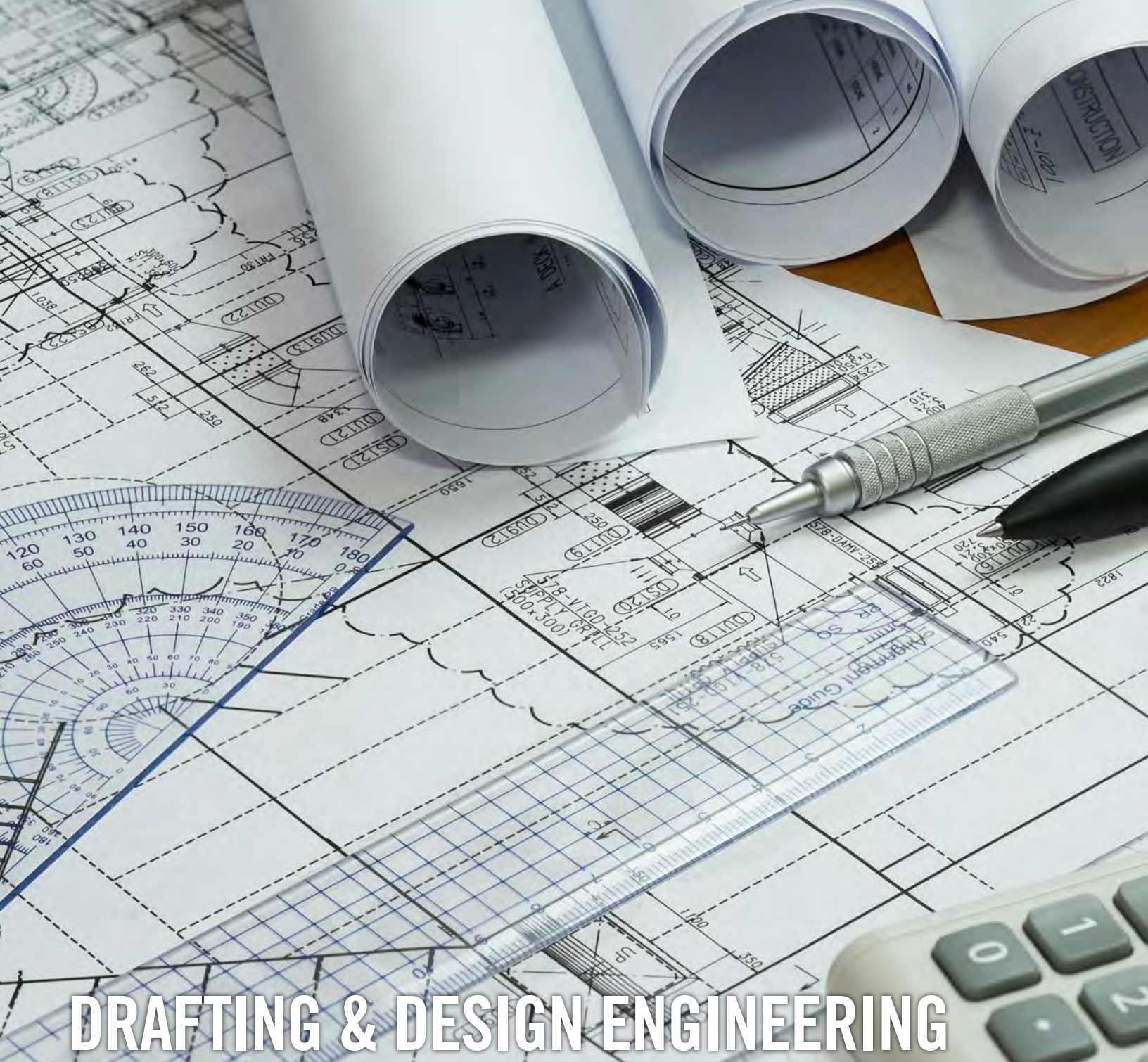
LEVEL 2

- Exercise Design
- Emergency Care
- Nutrition and Hydration

LEVEL 3

- Legal and Ethical Issues
- Human Development and Mental Health
- Injury Recognition and Prevention
- Pharmacology

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



DRAFTING & DESIGN ENGINEERING

YOU DREAM IT, WE DRAW IT

Do you wonder how homes, cars, planes, trains, and everything we use every day are designed? Have you always loved creating structures? Before anything can be manufactured or built, it needs to be designed. In **Drafting & Design Engineering** you will learn how to design and construct 3D models. When you graduate, you will be ready to work as a draftsman or to continue studying for a career as an architect or engineer. Use your creative mind to create structures, vehicles, and parts for the future. Design your career in Drafting & Design Engineering!

Did you KNOW?

*Frank Lloyd
Wright's son
invented Lincoln
Logs. John
Lloyd Wright
was inspired by
the interlocking
beams of the
foundation below
the Imperial
Hotel in China.*

CAREER FOCUS

Prepared to enter the workforce as an entry-level draftsman or continue post-secondary education.

CERTIFICATION OPPORTUNITIES

OSHA 10-Hour General Industry Certification

ACADEMIC CONSIDERATIONS FOR SUCCESS

- Students should have math skills that include computation, measurement, geometry, and algebra
- Reading comprehension is Grade 11

WHAT GENERAL SKILLS ARE REQUIRED IN DRAFTING & DESIGN ENGINEERING?

- Students should be creative, forward thinking, able to visualize a complete project, and have the skills to solve problems within designs
- Mechanical and visual spatial aptitudes
- Great attention to details and the ability to work with minimal supervision
- Excellent communication skills

WHERE DO PEOPLE IN DRAFTING & DESIGN ENGINEERING WORK?

People with a Drafting & Design Engineering background work for companies that design buildings, vehicles, community infrastructure, or parts. Employment opportunities include draftspersons, engineers, and architects.

WHAT WILL YOU LEARN IN DRAFTING & DESIGN ENGINEERING?

LEVEL 1

- Fundamentals of Drafting
- Geometric Structures
- Dimensioning Techniques
- Computer Aided Drafting (CAD)

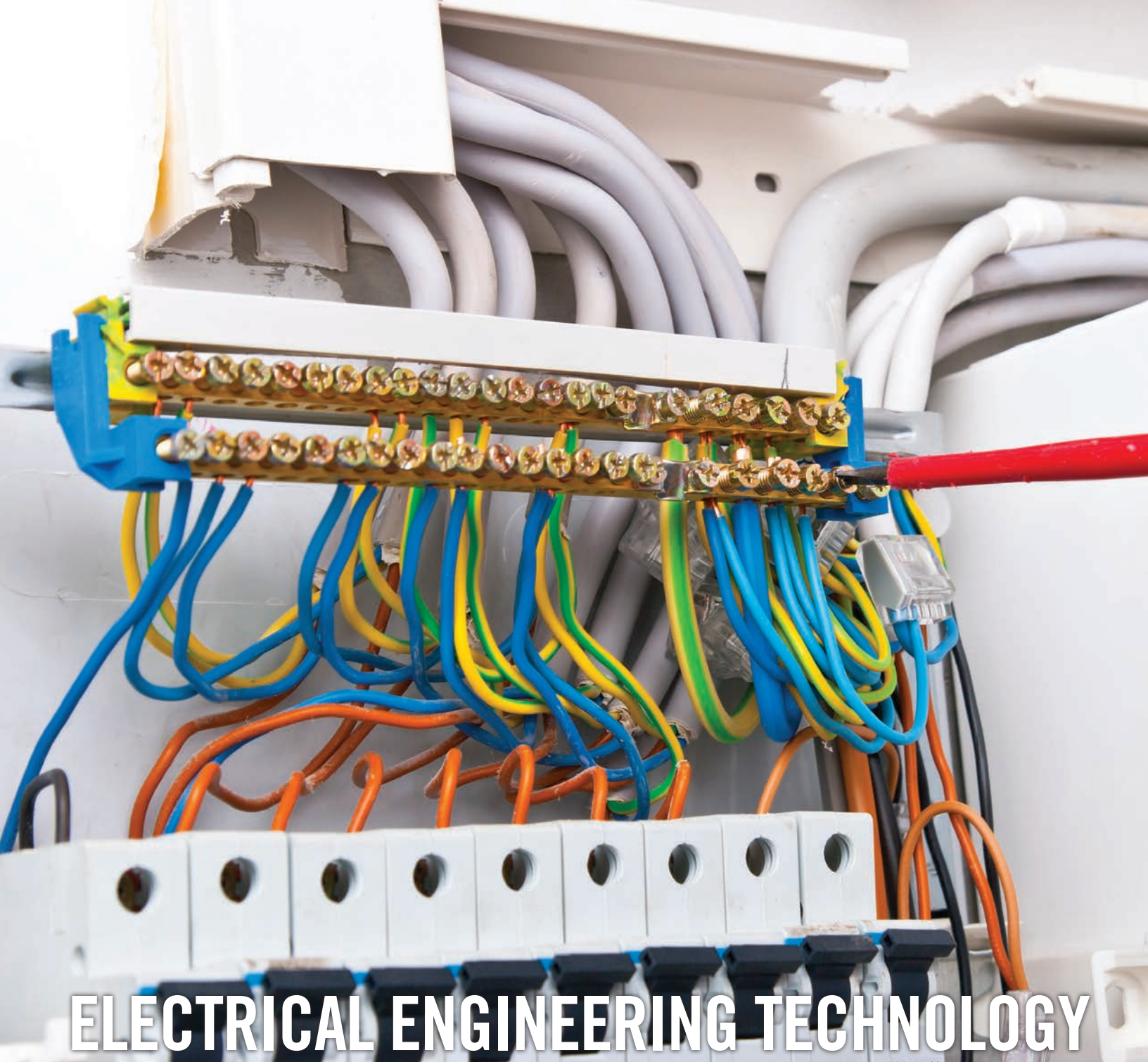
LEVEL 2

- 3D Solid Modeling
- Pre-Engineering Concepts
- Architecture
- 3D Solid Modeling for Assemblies and Details

LEVEL 3

- Architectural Model Building
- Mold Design
- Gear & Cam Design
- Manufacturing Processes

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



ELECTRICAL ENGINEERING TECHNOLOGY

TURNING ON THE CIRCUITS

Want to learn how to light up the world? Our world is powered by electricity. The ECTS **Electrical Engineering Technology** program prepares you to become a certified electrician and teaches you how to design electrical systems. You will be ready to work in the residential or industrial field. Light up your career in Electrical Engineering Technology.

Did you KNOW?

Master electricians train almost as long as doctors.

Electricians need to pass a color test.

Benjamin Franklin is considered one of the first electricians in history.

CAREER FOCUS

Prepared for immediate employment with an electrical contractor, apprenticeship, or further post-secondary education.

CERTIFICATION OPPORTUNITIES

OSHA 10-Hour General Industry Certification
Ladder Safety

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 11
- The math level includes algebra, measurement, and problem solving

WHAT GENERAL SKILLS ARE REQUIRED IN ELECTRICAL ENGINEERING TECHNOLOGY?

- Students in Electrical Engineering need to be good communicators and function as part of a team
- Attention to detail
- Ability to problem solve, troubleshoot, and make decisions
- Physical stamina

WHERE DO PEOPLE IN ELECTRICAL ENGINEERING TECHNOLOGY WORK?

People with electrical aptitude become electrician apprentices, electrical/production maintenance technicians, hydraulic/pneumatic technicians, linemen, and work in electrical supply sales.

WHAT WILL YOU LEARN IN ELECTRICAL ENGINEERING TECHNOLOGY?

LEVEL 1

- Electrical Theory
- Hand and Power Tools
- Electrical Symbols and Blueprints
- Electrical Test Equipment

LEVEL 2

- Conduit Bending
- Motor Controls
- National Electric Code
- Green Technology

LEVEL 3

- Programmable Logic Controls
- Introductory Hydraulics and Pneumatics
- Low Voltage Systems Communications
- Electrical Services

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



METAL FABRICATION TECHNOLOGY

SPARKS THAT BUILD THE FUTURE

Did you ever ride a roller coaster and wonder how the metal parts are designed and put together? Do you cross a metal bridge and question how it was constructed? If so, you will enjoy working with metal and welding equipment. **Metal Fabrication Technology** will teach you to weld and fabricate metal, along with reading blueprints to create metal products. Get ready to make sparks fly in Metal Fabrication Technology!

Did you KNOW?

Welding is one of the oldest forms of technology. There is evidence it dates back at least 10,000 years.

Welding helped humans create the modern wheel.

Over half of man-made products require some welding.

CAREER FOCUS

Prepared for immediate employment, apprenticeship, advanced certifications, and further education.

CERTIFICATION OPPORTUNITIES

AWS Entry-Level Welder
OSHA 10-Hour Safety Training Certificate

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 10
- Students should have math skills that include measurement, computation, estimation, and reasoning.

WHAT GENERAL SKILLS ARE REQUIRED IN METAL FABRICATION TECHNOLOGY?

- Students should be curious about how things are designed and made from metal
- Enjoy creating objects and reading blueprints
- Good manual dexterity, physical strength, and stamina
- Great attention to details and safety
- Committed to making quality products

WHERE DO PEOPLE IN METAL FABRICATION TECHNOLOGY WORK?

People with a background in Metal Fabrication work in large-scale manufacturing operations or specialized fabrication shops. Employment opportunities include fabrication technicians, custom fabricators or welders.

WHAT WILL YOU LEARN IN METAL FABRICATION TECHNOLOGY?

LEVEL 1

- Foundations of Metal Fabrication Technology
- Introduction to Metallurgy
- Introduction to Oxyacetylene Cutting
- Shielded Metal Arc Welding

LEVEL 2

- Gas Metal Arc Welding
- Blueprint Reading
- Structural Fabrication
- Plasma Arc Cutting Carbon Arc Cutting

LEVEL 3

- Gas Tungsten Arc Welding
- Metal Characteristics & Properties
- Flux Core Arc Welding
- Advanced Fabrication

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.



PRECISION MACHINING TECHNOLOGY

CREATING INCREDIBLE THINGS WITH METAL

Do you like the idea of working with your hands and using computers to create products that keep our world running? From the smallest screw to the largest part you can think of, if it is made from metal, precision machinists can make it. **Precision Machining Technology** is the basis for all manufacturing world-wide.

Did you KNOW?

An average car has over 30,000 parts. A commercial airplane has over 6 million parts. All the parts of a car and plane are made by precision machinists.

Over 200 companies in Erie County employ Precision Machinists. Last school year, over 100 employers called ECTS looking to hire students from the Precision Machining career major.

CAREER FOCUS

Prepared for immediate entry into the workforce as an apprentice or a machinist; or further education for a degree in Manufacturing or Engineering.

CERTIFICATION OPPORTUNITIES

NIMS (National Institute of Metalworking Skills)
OSHA 10-Hour Safety

ACADEMIC CONSIDERATIONS FOR SUCCESS

- The reading comprehension level is Grade 10
- The math skills includes algebra, trigonometry, and measurement

WHAT GENERAL SKILLS ARE REQUIRED IN PRECISION MACHINING TECHNOLOGY?

- Good problem-solving skills
- Ability to combine hands-on work with computer skills
- Precise and detail oriented
- Committed to quality production

WHERE DO PEOPLE WORK IN PRECISION MACHINING TECHNOLOGY

Every company that produces anything utilizes Precision Machinists. They also go on to earn degrees in engineering. Machinists set-up and operate a variety of computer controlled and mechanically controlled equipment to produce precision metal parts, instruments, and tools. Employment opportunities include CNC machine operators, toolmakers, machine apprentices or quality control inspectors. Knowing how to manufacture a part can lead to a future career designing the part.

WHAT WILL YOU LEARN IN PRECISION MACHINING TECHNOLOGY?

LEVEL 1

- CNC Mill and Lathe
- Turning and Lathe Tooling
- Introductory Blueprint Reading

LEVEL 2

- Milling and Drilling Concepts
- Precision Surface Grinding
- Heat Treatment of Metals

LEVEL 3

- Multipart Design and Assembly
- Lean Production Concepts and Controls
- NIMS Projects, Credentials, and Safety

This is a sample of the curriculum. The complete curriculum can be found on the ECTS website.

FREQUENTLY ASKED QUESTIONS

Q. When do students attend ECTS?

A. Students attend ECTS beginning in their sophomore year and spend half of the school day at ECTS. The morning session runs from 8 – 10:45 a.m. and the afternoon session runs from 12 – 2:45 p.m. The remainder of the day will be spent at the sending school taking academic classes.

Q. How much does it cost to attend ECTS?

A. ECTS is tuition free! Some programs may require lab related fees.

Q. How do students get to ECTS?

A. Each sending school district is responsible for busing students.

WHAT'S NEXT?

Visit the ECTS website at ects.org to watch a short video of each Career Major. Visit with your class in November. Apply through the ECTS website. The school counselor can assist you with any step of the process. ECTS is always here to help you as well.

ECTS students are prepared to continue their education or enter the workforce with a specific set of skills to begin building a promising career!

EXPERIENCE IS EVERYTHING, ECTS STUDENTS LEARN BY DOING!

PARTICIPATING DISTRICTS

Fairview
Fort LeBoeuf
General McLane
Girard
Harbor Creek
Iroquois
Millcreek
North East
Northwestern
Union City
Wattsburg

Erie County Technical School is committed to providing quality education aligned with the trends and latest technology in current careers to prepare students for further education or immediate employment upon graduation.

MISSION

The Erie County Technical School mission is to deliver career success to Northwest Pennsylvania through:

Employ-Ability
Career Planning
Technical Education
Supporting Academics



8500 Oliver Road | Erie, PA 16509 | (814) 464 - 8600

Erie County Technical School is an equal opportunity educational institution and will not discriminate on the basis of race, color, national origin, sex and handicap in its activities, programs or employment practices as required by Title VI, Title IX and Section 504. For information regarding civil rights or grievance procedures, contact the Human Resources Coordinator for the Title IX and Section 504 Coordinator at 8500 Oliver Road, Erie, PA 16509, 814-464-8600.