

**Preparing today's  
students for  
tomorrow's careers.**



**SYRACUSE CITY SCHOOL DISTRICT 2014 HIGH SCHOOL CHOICE PROGRAM**





**The path to your dream career is waiting.  
Let's take the first step...**



# Syracuse City School District Career & Technical Education Program

## PROGRAMS OF STUDY



The world is full of exciting job opportunities and SCSD connects you to them — with the fundamentals, training, certification and hands-on experience you need to excel in your chosen career path.

Have you ever dreamed of owning your own salon or barber shop? Do you get “fired up” at the idea of owning a restaurant? How about playing a role in the fast-paced world of EMTs, Syracuse Police Officers or Syracuse Firefighters? Or maybe your dream is to be on-screen, hosting the evening news or ESPN? If you are interested in any of these exciting careers, then the SCSD Career and Technical Education (CTE) program has exactly what you are looking for.

Currently, the Syracuse City School District offers CTE programs in all 5 high schools. These exciting programs include law enforcement and fire/rescue, cybersecurity, cosmetology, crime scene investigation, media and communications, welding, nursing, medical assisting and geospatial intelligence.

**As a Syracuse City School District student you can opt to attend the school that will give you the best CTE experience.**

Students will also have the opportunity to obtain required, relevant industry-recognized certification. In addition, local professionals will provide you with hands-on instruction and experiences, while internships and mentorship programs will give you the opportunity to earn college credits!

**The path to your dream career is waiting. Take the first step...**

**Automotive Technology  
Computer Forensics  
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## Automotive Technology

It takes more than the turn of a key to make a car go. Working on today's cars requires an understanding of the science and technology that goes into the modern automobile.

In the Automotive Technology program at the Institute of Technology at Central, students spend time in the classroom and then apply what they've learned on real cars in our state-of-the-art facilities.

**Training includes diagnosis and repair of all automotive systems using modern tools and diagnostic equipment, with an emphasis on:**

- Engine management systems
- Driveability
- Drivetrain systems
- Chassis
- Maintenance

### **Career Opportunities:**

Professional Mechanic, Body Shop Technician, Automotive Repair, Garage Owner

## Computer Forensics NEW!

There are secrets and hidden details locked inside every computer. It takes a skilled Computer Forensics professional to find them and bring a criminal to justice.

From auction fraud to social engineering, from email scams to phishing — in Computer Forensics at the Public Service Leadership Academy at Fowler you'll learn techniques to search for, preserve and analyze information on computer systems to find potential evidence for a trial.

**Courses will involve in-depth coverage of:**

- Computer crime laws
- Collection and management of evidence
- Analyzing computers that might contain crime-related information
- Preparing computer evidence for courtroom testimony

### **Career Opportunities:**

Information Technology, Law Enforcement, Computer Forensic Specialist, Digital Forensics Expert

## Cosmetology/Barbering

Beauty is in your hands! Have you ever dreamed of owning your own salon or barber shop? Are you interested in skin and nail care? The two-year Cosmetology/Barbering program will prepare you for all careers related to cosmetology/barbering.

Students will have an opportunity to work at a real salon or barber shop, located at the Public Service Leadership Academy at Fowler, to gain hands-on experiences in many aspects of cosmetology/barbering. These include using people skills as the receptionist to providing services to students, staff and members of the community including nail, skin and hair care.

Cosmetology/Barbering students will be immersed in the field and gain practical experience. Through class instruction and working in the salon, students will be prepared for both the New York State written and practical examinations.

**Upon completion of the two-year program, students will be issued an application to apply for their temporary license.**

### **Career Opportunities:**

Stylist, Barber, Manicurist/Pedicurist, Esthetician, Cosmetologist



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## Culinary Arts

Today, you're a foodie and a talented home cook. Tomorrow, you could be a chef cooking up something amazing! The Culinary Arts program at the Institute of Technology at Central provides students with a working knowledge of classical culinary techniques and restaurant management essentials through lecture, hands-on experience and project-based learning.

**During the two-year program, students will learn the skills needed for a career in the culinary profession including:**

- Pastry and baking techniques
- Food preparation and service
- Cooking methods for common dishes
- Restaurant management
- Food and kitchen safety

In addition, students also operate a Cafe and a catering business that gives them experience in menu selection, meal preparation and small business management.

### **Career Opportunities:**

Chef, Pastry Chef, Line Cook, Restaurant & Banquet Management

## Cybersecurity

**NEW!**

We live in a digital world. Whether it's keeping in touch with friends, operating a city's energy grid or strengthening national security, it happens online. The need to secure our networks has never been greater. The number of cyber attacks increase dramatically every year, and people with technical skills are needed to ensure online security.

As a student in the Cybersecurity program at the Public Service Leadership Academy at Fowler you'll learn how to make online information more secure and protect users from the growing threat of cyber attacks. This program teaches the core concepts needed to understand, assess and protect information security systems.

**This pathway will develop the knowledge and skills needed to master the core concepts in cybersecurity. The pathway will cover the three foundation areas of information security:**

- Networking
- Operating Systems
- Systems Administration

### **Career Opportunities:**

Security Manager,  
Cyber Threat Analyst

## Electrical Trades

With advancements in technology -- driving increasingly complex installation techniques for wiring, safety and repair -- electricians are in high demand and will continue to be in the future.

From designing lighting systems to installing street lights and intercom systems to learning about the latest renewable energy concepts including solar, wind and geothermal technologies — this two-year program provides the hands-on skill development and technical training you need to secure entry-level employment (or higher) in the electrical trades field.

**Students in the Electrical Trades program at the Public Service Leadership Academy at Fowler will learn about:**

- Key theories behind digital electronics and circuitry
- Installation of switches and receptacles
- Intricacies of wiring
- Connections and conductors

### **Career Opportunities:**

Electrician, Transmission Technician, Lineman, Residential Wireman



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## Emergency Medical Technician (EMT) **NEW!**

When every second counts... when the situation is at its worst... when there's an accident or medical emergency — that's when an Emergency Medical Technician (EMT) is at their best. EMTs are first responders, assessing dangerous situations and stabilizing the sick or injured — all while maintaining patience, understanding and compassion.

The EMT pathway at the Public Service Leadership Academy at Fowler is designed to train students to function independently in a medical emergency and be capable of providing pre-hospital care at the scene or in transportation.

### Upon successful completion of the training program, students will:

- Be proficient in Basic Life Support (BLS) and Cardiopulmonary Resuscitation (CPR)
- Know how to recognize and treat life-threatening emergencies
- Understand the basics for handling cardiac and respiratory arrest, heart attacks, seizures and diabetic emergencies
- Realize how to manage traumatic injuries such as fall, fractures, lacerations and burns
- Have hands-on experience in conducting patient assessment, history, and vital signs

### Career Opportunities:

Emergency Medical Technician, Paramedic

## Fire/Rescue **NEW!**

It takes a special set of skills to become a firefighter: Courage, strong communication and the ability to make quick decisions — not to mention physical strength and stamina. All of these skills are put to the test when a firefighter responds to an emergency.

Firefighters are required to enter burning buildings to extinguish a fire and rescue individuals. Firefighters may also be responsible for connecting hoses to hydrants, operating pumps to power the hoses, climbing ladders and using other tools to break through debris. In addition, one of the biggest parts of the job doesn't involve fire at all — it's responding to medical emergencies and providing emergency medical care.

### As a student in the Fire/Rescue program at the Public Service Leadership Academy at Fowler, you'll learn about fire prevention and develop critical fire skills necessary to handle the challenges and demands of fire protection:

- Fire awareness and safety management
- Tactics and operation
- Hazardous materials
- Fire hydraulics

### Career Opportunities:

Firefighter, Fire Protection Professional, Industrial Fire Safety Professional, Fire Investigator

## Forensic Science/Crime Scene Investigation **NEW!**

You know what a Crime Scene Investigator looks like on television. Now, get to know the real career. Forensic Science plays a vital role in the criminal justice system — providing investigators with scientifically-based information through the analysis of physical evidence.

### As a student in the Forensic Science/CSI pathway at the Public Service Leadership Academy at Fowler you'll be exposed to the real, everyday life of a crime scene investigator, gaining knowledge and hands-on experience in:

- Collecting and preserving material evidence found at crime scenes — including measuring, recording and analyzing chemical substances (such as tissue samples, physical materials and ballistics evidence)
- Communicating with experts in fingerprinting, ballistics, handwriting, electronics, documents, chemistry, medicine or metallurgy to interpret evidence
- Reconstructing crime scenes and testifying as a witness in trials or hearings

This pathway will involve a rigorous and relevant four-course Project Lead the Way (PLTW) Biomedical Science sequence.

### Career Opportunities:

Crime Scene Investigator, Private Investigator, Law Enforcement



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## Geospatial Intelligence (GEOINT) **NEW!**

Geospatial analysis has existed as long as humans have made and studied maps — but its importance to the intelligence community has skyrocketed in the past several years, with Unmanned Aerial Vehicles and drones increasingly being used to both gather intelligence and take down enemy targets.

Would you like to be the eyes of the intelligence community? Then consider a job in one of the fastest-growing arenas of national security — geospatial intelligence.

**In this program at the Public Service Leadership Academy at Fowler you will build strong foundations in:**

- Mathematics and science
- Computer skills and broad research
- Writing and analysis skills

If you're the kind of student who has always been good with maps, you know how to get the most from your GPS device or Google Earth, and possibly have a background in Geographic Information Systems (GIS) — then GEOINT might be the perfect fit for you.

### **Career Opportunities:**

Advanced Visualization Specialist, Aeronautical Analyst, Geodetic Surveyor, Military Analyst, Earth and Orbit Scientist, Radar Image Scientist, Thermal Infrared Image Scientist, Geospatial Data Steward

## Law Enforcement **NEW!**

With advances in technology — and the growing concern for terrorism since the tragedy of 9/11 — the need for homeland security and the demand for highly skilled law enforcement professionals has never been more apparent. America is looking for a new breed of law enforcement professional, equipped to meet the changes in national security.

As a student in the Law Enforcement Pathway at the Public Service Leadership Academy at Fowler, you will learn to react appropriately and professionally to situations where the public might be at risk — by manmade or natural emergencies.

**You will learn the tactics, theory and skills required of today's law enforcement professionals including:**

- Training in DNA analysis
- Surveillance expertise
- White collar crime tactics
- Specialty services instituted since 9/11
- Cadet training

### **Career Opportunities:**

Law Enforcement, Private Investigator, FBI Agent, State Trooper, Secret Service Agent, US Marshall, ATF Agent

## Media Communications

Whether you dream of anchoring a news desk, covering sports or working behind the scenes as a camera operator/programmer you'll be on the right path with the Media Communications program at the Institute of Technology at Central.

As a student in this program you will learn to work in a professional television studio while being involved in operating the school's news and communication network including: daily announcements, social media, news magazines and web presence.

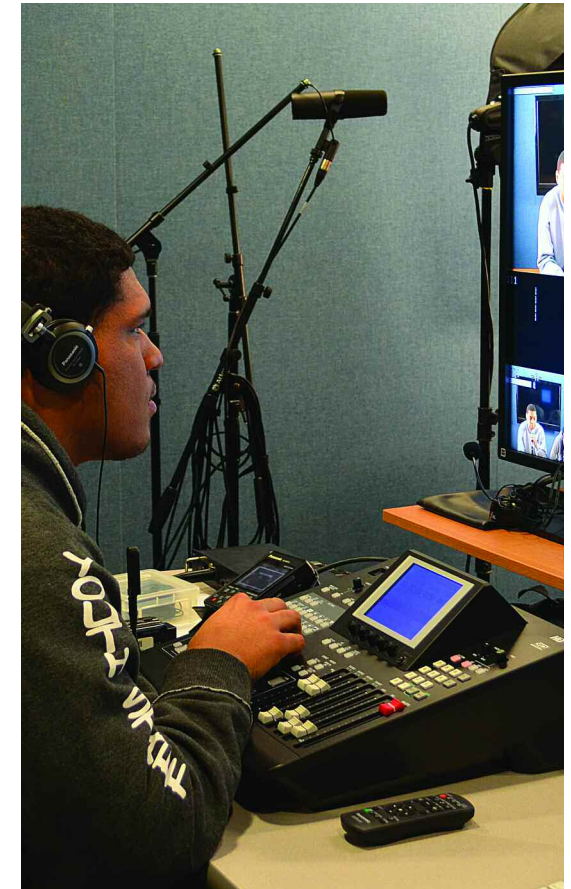
The class structure is project-based, and the hands-on creation of finished projects is supplemented with readings, writing, lectures, demonstrations, video, online research and critiques.

### **In this program, you will:**

- Learn video and photo methods to professionally edit footage into finished videos.
- Apply creative and professional framing techniques to photo shots
- Create photo shot lists and storyboards and use digital story telling principles

### **Career Opportunities:**

Reporter, Anchor, Producer, Editor, Public Relations, Advertising, Spokesperson



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## Medical Assisting

You're a caring and compassionate person who loves to help others. As a student in the Certified Medical Assisting Program your compassionate nature will be enhanced by the essential knowledge you need to become a Certified Medical Administrative Assistant (CMAA), as well as a Certified Clinical Medical Assistant (CCMA).

**The Medical Assisting pathway is offered in the Health Careers Academy at Henninger High School for any student interested in obtaining a Medical Assistant Certification upon graduation from high school. The program provides information and skills common to all medical assistants, including the ability to:**

- Take a patient's history
- Prepare an examination room
- Assist physicians during examinations

### **Career Opportunities:**

Medical Lab Technician, Phlebotomist, Nurse, Radiology Technician, Respiratory/Occupational/Physical Therapist, Case Manager

## Navy JROTC

Have you thought about serving our Country in the United States Navy or attending the Naval Academy for college? The mission of NJROTC is to instill in students the values of citizenship, service to the United States, personal responsibility and a sense of accomplishment.

As a NJROTC cadet at the Public Service Leadership Academy at Fowler you are embarking on one of the most interesting and valuable educational experiences of your high school career. In NJROTC you will be given the chance to participate in your education and will learn to be a better citizen.

**The program provides you with tools and skills you can use to succeed in high school, but far more importantly, these tools and skills will be useful for the remainder of your life. Benefits will include:**

- Development of leadership potential
- Promotion of community service
- Development of a high degree of personal honor
- Self-reliance, individual discipline and leadership

### **Career Opportunities:**

Military, Arts & Education, Aviation, Engineering & Applied Science, Health Care, Information & Technology, Nuclear Energy, Special Warfare/Special Operations

## Natural Resources NEW!

The Earth is more than just the ground underneath us; it's our greatest Natural Resource. The study of Natural Resources is an interdisciplinary pathway offered at Nottingham High School.

In this program, you'll develop an integrated view of the biological, ecological and social dimensions of the environment. In addition to academic course work, you'll have the opportunity to learn about careers through guest lectures and field trips to businesses/industry and government agency partners.

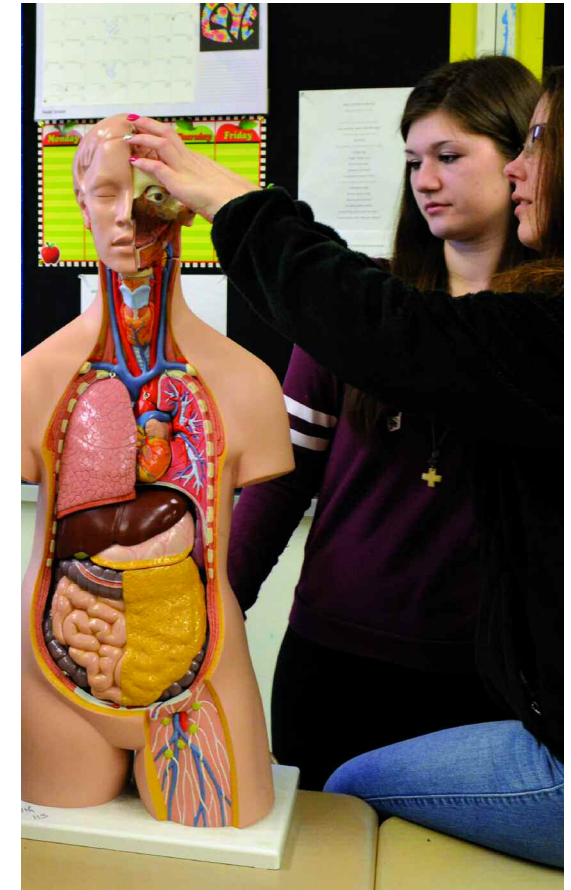
Each student can choose to take CTE required courses, Regents level courses or courses with dual-enrollment from SUNY-ESF, Syracuse University Project Advance and Onondaga Community College.

**Students enrolled in this pathway will acquire skills including, but not limited to:**

- Planning and design
- Conservation management and environmental health
- Bioprocess engineering, biotechnology, chemistry and land surveying, park maintenance

### **Career Opportunities:**

Environmental Engineer/Scientist/Specialist, Natural Science Manager



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## Nursing **NEW!**

Nursing is the fastest-growing occupation in the United States. Nurses make up the majority of the healthcare industry and that number is going up, with 581,500 more nursing jobs by 2018. Why? There are a lot of reasons, including an aging population and a shrinking nursing workforce.

**Nursing is a blend of science and technology with the art of caring and compassion. Nursing students at Henninger will learn to provide preventative and restorative health-care to patients in a variety of settings:**

- General and surgical hospitals
- Doctors' offices
- Nursing care facilities
- Outpatient facilities
- Home health services

Nurses work to promote health, prevent disease, and help patients cope with illnesses. Nursing deals not only with a person's biological needs, but their psychosocial and cultural needs as well. Nurses work closely with doctors and other health care professionals, and serve as advocates for patients and families.

**Career Opportunities:**  
Nursing

## Pre-Engineering

The next generation of scientists, engineers and creative minds will design the world of our future. From building bridges and roads to electrical grid systems and aircraft, engineers create critical and innovative designs for improved structures.

**Through problem-solving, team-building, critical thinking and creativity, students in the Pre-Engineering programs offered in all 5 high schools will learn about:**

- Engineering design
- Civil engineering and architecture
- Digital electronics

**Career Opportunities:**  
Civil Engineering Technician,  
Mechanical Engineering Technician,  
Industrial Engineering Technician

## Welding

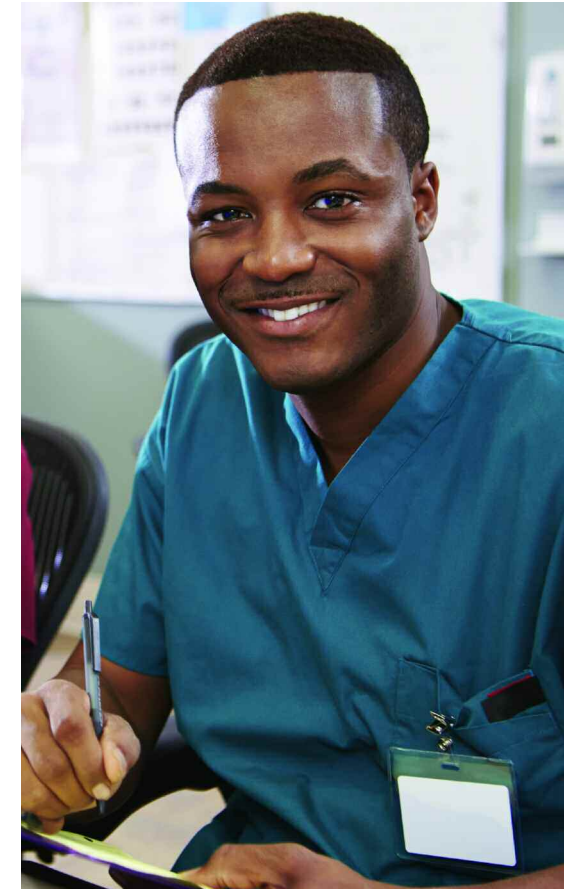
The Welding Program delivers a combination of classroom theory and practical experience within the Weld Shop at the Johnson Center over a period of one to three years. The program is designed to prepare students for extended study in an apprenticeship, two-year college or employment.

The skills taught are based on the Standards of the American Welding Society (ASW). The society and its standards are recognized worldwide as a benchmark for skilled welders. Skills learned in this program give students a step up on their college training and will transfer anywhere in the United States.

**The program will involve the following:**

- Basic and advanced practices of metal inert gas (MIG), stick and tungsten inert gas (TIG) welding
- Plasma and torch cutting
- Metal art
- Safety (OSHA training)
- Introduction to fabrication and repair
- Aluminum and stainless steel TIG Welding

**Career Opportunities:**  
Welding, Construction



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## Syracuse P-TECH **NEW!**

Syracuse P-Tech is a specialized high school housed at the Institute of Technology. This is a partnership with Onondaga Community College and the Manufacturer's Association of Central New York (MACNY) in which SCSD students will have the opportunity to participate in this cohesive five or six-year program (9-14), which combines high school, college and career training.

### **The essential elements of Syracuse P-TECH are a focus on:**

- High School Diploma and College Degree within five/six years
- Careers Awareness — Work-Based Learning experiences with business partners
- Technology Pathways — Program of study in either Electrical Engineering Technology or Mechanical Technology
- First in line opportunity for advanced manufacturing jobs in CNY

### **Electrical Engineering**

You're the kind of person who likes to tinker. You'll take something apart, study its ways and put it back together. Not always because it's broken — sometimes just for fun. If this sounds familiar, then you may be interested in a career in Electrical Engineering.

In this program you will learn the skills you need to "tinker" on a professional scale: construct, test, analyze, trouble-shoot and repair systems and sub-systems reflective of modern technology using real-world engineering tools and the technologies of today.

In this program you'll also learn fundamental engineering concepts such as electronics, industrial control, instrumentation, communications, power distribution and electronic hardware while taking your problem-solving skills to the next level.

### **Career Opportunities:**

Electrical Engineer, Electronics Technician/Installer/Repair, Electrician

### **Mechanical Technology**

Behind the scenes, behind the machines, behind the technology you use every day — there's a mechanical technician inventing, reinventing and perfecting the machines that enable our modern lives.

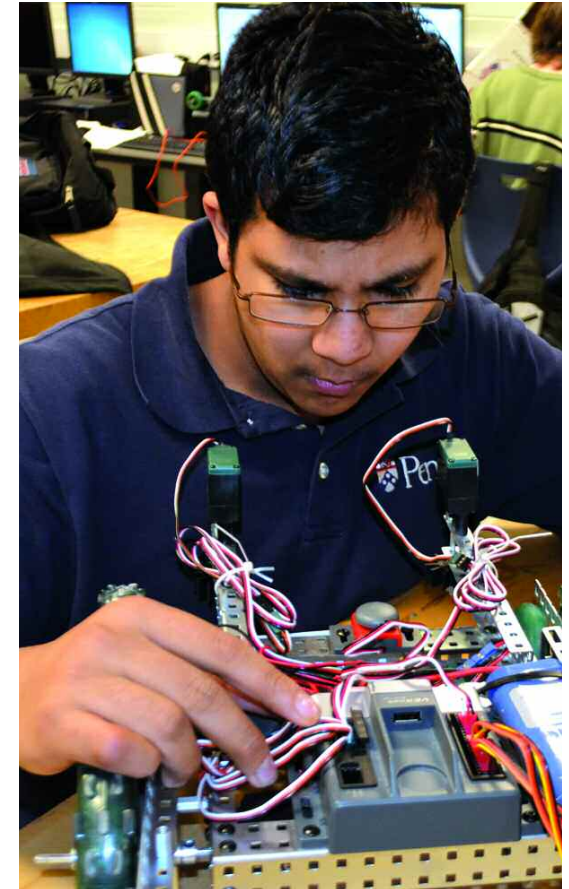
As a student in the Mechanical Technology program you'll learn about the latest technological advancements in computer drafting, computer-aided design and manufacturing.

In addition, you'll gain hands-on experience in using computer software to analyze and design mechanical systems and automated manufacturing systems.

With this experience, you'll have the basis to create, build and shape the way we live for generations to come.

### **Career Opportunities:**

Mechanical Engineer, Drafter, Machinist/Tool and Die Maker



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**TAKE THE FIRST STEP AND REGISTER TODAY!**  
Go online to [www.syracusecityschools.com](http://www.syracusecityschools.com)  
and click on the High School Choice button.  
Contact the Student Registration Center at  
**315.435.4545** or email us at [registration@scsd.us](mailto:registration@scsd.us)  
for more information.



Superintendent Sharon Contreras and the Syracuse City School District invite all businesses and community members to partner with the District to ensure that these CTE programs are successful. There are a number of opportunities to become involved.

- Provide input and support for Career and Technical Education programs
- Offer internship, externship and work-based learning opportunities to qualified students in your places of business
- Participate in the CTE Partnership Council chaired by the Superintendent and CTE program-specific Advisory Boards
- Support and advocate for legislation for renovation and specialized CTE funding

If you are interested in partnering with the District, please contact Brian Nolan, Executive Director of High Schools and Career and Technical Education, at [bnolan@scsd.us](mailto:bnolan@scsd.us)



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