

UNiCON

Unions and Businesses
United in Construction

2022



RESOURCE GUIDE TO THE CONSTRUCTION INDUSTRY

An all-inclusive resource to everything you need to know about the construction industry in the Finger Lakes Region. From career pathways, apprenticeship programs, and local colleges to trade specialty information, expected wages, and more!

Electronic Resources, Printables, and Guides: uniconroc.com/resources

RESOURCE GUIDE MISSION

STUDENTS & JOB SEEKERS: WE WANT YOU!


The mission of the Construction Industry Resource Directory is to make information available for current and future career seekers who have an interest in joining the skilled construction trades and related professions. The vast field of construction incorporates numerous professions; the purpose of this directory is to provide information related to each craft and profession, and provide a connection to the pathways for entering your field of choice.

CONSTRUCTION TRAINING PROGRAMS

This directory contains contact information for the Rochester area local unions associated with each trade. It also provides a listing of community and secondary programs and colleges in Rochester and throughout New York State that offer training programs related to the various Architectural, Engineering and Construction related professions.

TYPES OF TRADES

Construction encompasses all different types of skills and crafts and requires many different disciplines – from carpentry and painting to plumbing and electrical. All of these crafts exist in many different areas of the industry: residential, commercial, industrial, institutional (schools, hospitals etc.), heavy-highway (roads, bridges) and more. As with any life decision, knowing what specialty your skills match will make your experience more successful and save you time in the long run. It is worth taking a look at all your options before choosing one and this directory can be your first step on that journey.



WHAT ARE UNIONS?

CONSTRUCTION TRADE UNION

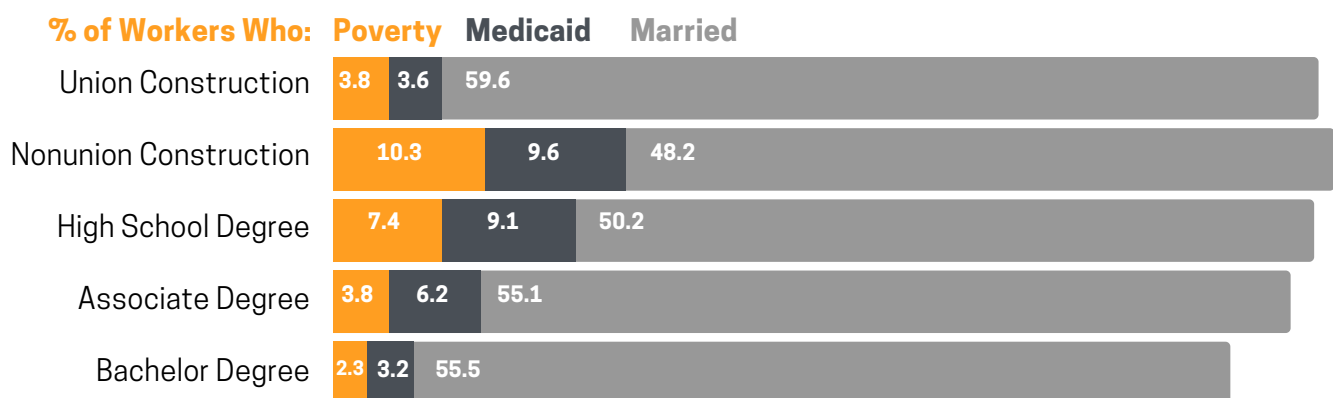
Construction can be a very fulfilling job, but can also be dangerous if the proper safety measures are not being followed. That is what led to the creation of construction unions in the United States. Today, unions offer much more than safety precautions for their workers. Unions provide all the skills and safety training needed to become self-sufficient on the job through apprenticeships. They also offer advanced training periodically to all their members so that everyone can stay up-to-date on the latest technology and trends.

Construction unions have what's called a Collective Bargaining Agreement (a contract) that outlines everything from working conditions, wage rates, health insurance and benefits, overtime hour regulations, and more. This allows the union member the ability to be hired by any contractor at the pre-negotiated rate, and ensures that members work in safe conditions, are paid fairly, and are receiving the allotted benefits. During periods of low employment, the union's multi-employer agreements provide the worker with multiple opportunities for continued employment, as the union will refer you to another contractor and, at a minimum, you can expect to receive the same level of pay and benefits irrespective of the contractor you work for.

The construction union does all the negotiating on behalf of the entire union - apprentices all the way up to supervisors - so that any employer that hires a union member is already committing to upholding the contract. This allows union members the freedom from worrying about how to negotiate their pay and benefits when they switch employers. It also allows employers to know that every union member has received the proper skills and safety training required to perform the work.

SOCIAL IMPACT OF UNION CONSTRUCTION CAREERS

On average, as workers become better educated, their annual incomes increase and they become more likely to have good fringe benefits, according to the most recent study*. As workers become better educated, they become less likely to live in poverty, less likely to rely on government assistance programs, and more likely to be married. Being above the official poverty line and independent from Medicaid are markers of financial stability and marriage is associated with social stability and is a significant predictor of a family's ability to become homeowners.



Based on National study released by the Illinois Economic Policy Institute (ILEPI)

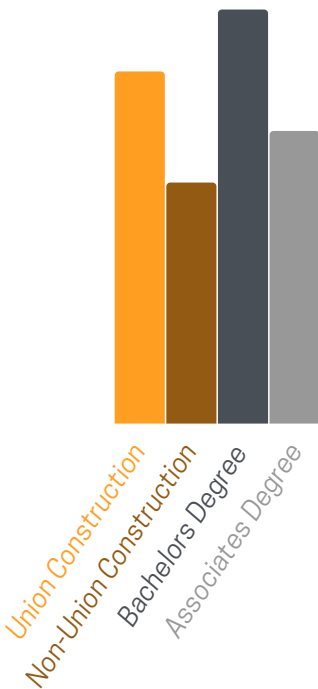
COLLEGE VS APPRENTICESHIP

HANDS-ON CAREER

For those looking for a “hands-on” career, then an apprenticeship in the skilled construction trades may be the right fit for you. Construction encompasses all different types of skills and crafts and requires many different disciplines, from carpentry and painting to plumbing and electrical.

A job in construction is more than a job – it’s a career – and apprenticeship is the preeminent pathway to building your exciting new future and a lifetime of professional fulfillment in construction!

Individuals seeking a career in Architecture or Engineering must pursue those career paths through secondary education at a college of your choice. These professions offer substantial and rewarding career choices and if college is right for you, then we strongly recommend you explore the many paths within these fields. Many regional Institutions that provide degree programs and related courses are outlined on the following pages.



Union construction workers average starting salary compared to other workers

Union construction workers earn \$58,000 per year on average, 46 percent more than nonunion construction workers (\$39,700). Among all workers with associate degrees and bachelor’s degrees, average incomes range from \$48,200 to \$68,200.



Graduate Apprenticeship with ZERO Student Loans!

The average student loan debt for recent college graduates is nearly \$30,000.

Based on National study released by the Illinois Economic Policy Institute (ILEPI)

PERKS OF THE CONSTRUCTION INDUSTRY

"My favorite part of being in [the apprenticeship] program is the sense of accomplishment I get when I complete job tasks with true craftsmanship. I can say, "I built that."

-Donald Warren
International Brotherhood of Electrical Workers (IBEW) Local Union 86



APPRENTICESHIP TRAINING PROGRAMS

WHAT IS AN APPRENTICESHIP?

Apprenticeship programs are a great way to become proficient in a trade while working in the union and earning a paycheck. The curriculum encompasses classroom instruction and jobsite training. Depending on the craft, programs typically last 3 to 5 years and apprentices receive one or more pay raises each year.

Apprenticeships are nicknamed "the other 4-year degree." Over their lifetime, graduates of apprenticeship programs can earn just as much, if not more, than their college counterparts, all while accumulating **zero student loan debt** and mastering their trade through state-of-the-art training programs. Apprenticeships in the unionized building trades are the gold standard in a **"Earn While You Learn"** apprenticeship model.

WHAT IS A PRE-APPRENTICESHIP?

Pre-apprenticeship programs are introductory programs that give someone new to the industry the basic skills, experience, and background they will need to be successful in an apprenticeship program. They are designed to give you a chance to experience one or more crafts before deciding which specialty is right for you, and the best part: all union pre-apprentices earn a paycheck while they learn - just as all apprentices do!



SKILLED TRADE SHORTAGE

NOW IS THE TIME TO START A CAREER IN CONSTRUCTION

The region – like so many across the nation – has experienced a shortage of skilled construction trade workers. To add to this gap in workers is the aging construction workforce with an average age of 43. It is imperative to introduce the next generation of workforce to the many exciting careers that construction has to offer!

NOW is the perfect time to consider a career in construction. Local apprenticeship, pre-apprenticeship and trade school programs help bridge this gap!

Current Industry Profile



Only 9% of the current construction industry is under the age of 25!

Projected Industry Profile



-HOWEVER-

By 2030, its predicted that Generation Z will make up 32% of the workforce

Based on data from BLS's Labor Force Statistics from the Current Population Survey



WAGES

Check out the list below to see the average journey person wage rates, benefits and total packages alongside the regional employment numbers of both union and non-union workers! Wages are updated yearly for each union.

2022-2023 PREVAILING WAGE RATES

BUILDING TRADE	WAGE	BENEFITS	TOTAL HOURLY	REGIONAL EMPLOYMENT
Boilermakers	\$35.10	+ \$31.04	= \$66.14	200
Bricklayers	\$32.81	+ \$25.68	= \$58.49	240
Bricklayers - Heavy Highway	\$34.88	+ \$25.53	= \$60.41	80
Carpenters	\$31.65	+ \$23.15	= \$54.80	1,950
Carpenters - Heavy Highway	\$34.18	+ \$25.40	= \$59.58	N/A
Electricians	\$37.50	+ \$27.93	= \$65.43	2,150
Lineman	\$56.00	+ 29.82	= \$85.82	170
Elevator Constructors	\$54.20	+ 36.89	= \$91.09	220
Glaziers	\$27.05	+ \$27.70	= \$54.75	200
Insulators: Mechanical	\$34.66	+ \$24.76	= \$59.42	70
Ironworkers	\$30.75	+ \$30.97	= \$61.72	140
Laborer - Building	\$28.07	+ \$22.28	= \$50.35	2,790
Laborer - Heavy Highway	\$30.51	+ \$25.00	= \$55.51	1,060
Millwrights	\$33.11	+ \$25.32	= \$58.43	130
Operating Engineers - Building	\$38.66	+ \$32.60	= \$71.26	920
Painters	\$41.06	+ \$29.89	= \$70.95	550
Plumbers, Pipefitters & Steamfitters	\$36.38	+ \$25.53	= \$61.91	1,330
Roofers	\$31.80	+ \$23.20	= \$55.00	410
Sheet Metal Workers	\$34.95	+ \$28.08	= \$63.03	670
Sprinkler Fitters	\$38.15	+ \$27.68	= \$65.83	N/A
Surveying & Mapping Technicians	\$43.51	+ 28.05	= \$71.56	170
Surveyors	\$47.37	+ 28.05	= \$75.42	120
Teamsters - Building	\$22.16	+ 12.38	= \$34.54	N/A

Based on data from NYSDOL's Monroe County Prevailing Wage Rates and Rochester, NY BLS employment numbers

DIRECTORY KEY

CAREER - ABOUT

This section identifies key jobs in the construction industry. They include job titles in the areas of skilled trades, architects, engineers, technicians, and construction management.

CAREER - PATHWAYS

This section gives a brief overview of possible career pathways available for the specified trade. As every journey is different, this should not be taken as the ONLY way to progress through a career! Speak to your school counselor for more details if one or more trades interest you!

HIGH SCHOOL

You don't have to wait until graduation to start pursuing your career! Students are encouraged to take available classes in math and science and trade-specific courses in the construction industry. Don't fret if math isn't your thing! Many people who don't see themselves as mathematicians can still develop the specific mathematical skills they will need for the construction industry by taking basic geometry courses. Certain trades will require more advanced knowledge, so talk to your counselor about ways to accumulate the appropriate amount of mathematical expertise.

LOCAL CONTACTS

We've outlined organizations that love to talk with students about their career and education options within this section. Feel free to visit their website and reach out over email or phone to get an industry professional's point of view.

COLLEGES

The colleges and universities listed in these sections offer either certificate, associate, or bachelor degrees in the specified fields.

UNION

If there is a local and national union associated with the specified trade, you will find their current contact information available in this section.

TABLE OF CONTENTS

JOB TITLES

Architect
Architectural & Civil Drafter
Boilermaker
Bricklayer & Allied Craftworker
Carpenter
Civil Engineer & Engineering Technician
Construction Manager
Electrical Engineer & Engineering Technician
Electrician
Elevator Constructor
Glazier & Painter
Insulator
Ironworker
Laborer
Mechanical Engineer
Millwright
Operating Engineer & Equipment Operator
Plumber & Pipefitter
Roofer
Sheet Metal Worker
Sprinkler Fitter
Surveyor & Mapping Technician

PRE-APPRENTICESHIP & COMMUNITY TRAINING PROGRAMS

ACE Mentor
Helmets to Hardhats
Job Corps
MAPP
RCCI
Urban league of Rochester

- Youthbuild
- Project B.E.A.M.
- Project Steps to Success



ARCHITECT

CAREER - ABOUT

Architects are licensed professionals trained in the art and science of building design who develop the concepts for structures and turn those concepts into images and plans.

Architects may be involved in all phases of a construction project, from the initial discussion with the client through the entire construction process. Their duties require specific skills — designing, engineering, managing, supervising, and communicating with clients and builders. Architects spend a great deal of time explaining their ideas to clients, contractors, and others. Successful architects must be able to communicate their unique vision persuasively.

CAREER - PATHWAYS

There are several occupations related to architecture where you can work independently or in a team to design commercial and residential buildings, hospitals, schools, landscapes, and interiors. Occupations which require a college degree and license exam include: Architect, Landscape Architect and Interior Architect. Related occupations which require some schooling or training include: Architectural Designer, Project Manager, and Drafter.



HIGH SCHOOL

Students interested in pursuing a career in architecture or related occupation can start honing their skills in high school by taking classes geared towards art, math, and science. Some colleges require a portfolio submission as part of the application for admittance, so taking art classes is a great way to prepare for that. Architects must be able to not only design, but account for the structural integrity of the building, so taking math courses each year of high school is ideal.

Suggested Specialty Courses:

Drafting, Computer Aided Design and Drawing, and Visual Art

Many school districts offer specialty courses or programs geared toward Architecture, STEM and Art. Contact your counselor to find out how you can participate in your school's programs.

LOCAL CONTACTS

American Institute of Architects — Rochester Chapter

(585) 232-7650

aiaroc.org

ARCHITECT

COLLEGES: 2-YEAR PROGRAMS

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Architectural Technology (A.A.S.)

186 Jay Street ▪ Brooklyn, NY 11201 ▪
(718) 260-5262

citytech.cuny.edu/architectural/architectural-aas.aspx

ERIE COMMUNITY COLLEGE

Architectural Technology (A.A.S.)

South Campus, Room 2222D ▪ 4041
Southwestern Blvd. ▪ Orchard Park, NY 14127
(716) 851-1770

ecc.edu/academics/architecture-technology.html

FINGER LAKES COMMUNITY COLLEGE

Architectural Technology (A.A.S.)

200 Victor Heights Parkway ▪ Victor, NY
14564 ▪ (585) 785-1100

flcc.edu/academics/architectural-technology/

HUDSON VALLEY COMMUNITY COLLEGE

Architectural Technology (A.A.S.)

80 Vandenberg Avenue ▪ Troy, NY 12180
(518) 629-8003

hvcc.edu/eit/act/index.html

MORRISVILLE STATE COLLEGE

Architectural Studies and Design (A.A.S.)

80 Eaton Street ▪ Morrisville, NY 13408 ▪
(315) 684-6000

morrisville.edu/programsofstudy/schoolofscienceandtech/architecturalstudiesanddesign/

SUFFOLK COUNTY COMMUNITY COLLEGE

Construction Technology, Architectural Technology (A.A.S.)

533 College Road ▪ Selden, NY 11784 ▪
(631) 451-4000

sunysuffolk.edu/curricula/CTAT-AAS.asp

SUNY DELHI

Architectural Technology (A.A.S.)

454 Delhi Drive ▪ Delhi, NY 13753 ▪
(800) 96DELHI

delhi.edu/academics/majors-programs/associates/architecture/index.php

SUNY DUTCHESS COMMUNITY COLLEGE

Architectural Technology (A.A.S.)

53 Pendell Road ▪ Poughkeepsie, NY 12601 ▪
(845) 431-8000

sunydutchess.edu/academics/catalog/current/programs/architectureandconstructiontechnologies/arc.html

SUNY ONONDAGA COMMUNITY COLLEGE

Architectural Technology (A.A.S.)

4585 West Seneca Turnpike ▪ Syracuse, NY
13215 ▪ (315) 498-2000

sunyocc.edu/index.aspx?menu=154&collside=542&id=6496



ARCHITECT

COLLEGES: 4-YEAR PROGRAMS

ALFRED STATE COLLEGE

Architectural Technology (B.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪
catalog.alfredstate.edu/current/programs/architectural-technology/

Architecture (B. Arch.)

Upper College Drive ▪ Alfred, NY 14802 ▪
catalog.alfredstate.edu/current/programs/architecture/

COLUMBIA UNIVERSITY

Architecture (B.A.)

2970 Broadway ▪ New York, NY 10027 ▪
(718) 854-8430
bulletin.columbia.edu/general-studies/undergraduates/majors-concentrations/architecture/

CORNELL UNIVERSITY

Architecture (B.Arch.)

129 Sibley Dome ▪ Ithaca, NY 14853 ▪
(607) 255-5236
aap.cornell.edu/academics/architecture/undergraduate

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Architectural Technology (B.Tech.)

Voorhees Hall 829 (V-829) ▪ 186 Jay Street ▪
Brooklyn, NY 11201
(718) 260-5262
citytech.cuny.edu/architectural/architectural-btech.aspx

FARMINGDALE STATE COLLEGE

Architectural Engineering Technology (B.S.)

Luptin Hall ▪ 2350 Broadhollow Road ▪
Farmingdale, NY 11735
(631) 420-2024
farmingdale.edu/academics/curriculum/bs-architectural-engineering-technology.shtml

RENSSELAER POLYTECHNIC INSTITUTE

Architecture (B.Arch.)

110 8th Street ▪ Troy, NY 12180 ▪
(518) 276-8478
arch.rpi.edu/academic/undergraduate-barch/

Building Science (B.S.)

110 8th Street ▪ Troy, NY 12180 ▪
(347) 327-0753
arch.rpi.edu/undergraduate-bldgscience/

SUNY BUFFALO

School of Architecture and Planning (B.S.)

Hayes Hall, Room 126 ▪ South Campus ▪
Buffalo, NY 14214
(716) 829-3483
catalog.buffalo.edu/academicprograms/architecture_bs.html

SUNY DELHI

Architectural Design and Building (B.S.)

454 Delhi Drive ▪ Delhi, NY 13753 ▪
(800) 96DELHI
delhi.edu/academics/majors-programs/bachelors/architecture/index.php

SYRACUSE UNIVERSITY

Architecture (B.Arch.)

201 Slocum Hall ▪ Syracuse, NY 13244 ▪
(315) 443-2256
soa.syr.edu/programs/undergraduate.php

ARCHITECTURAL & CIVIL DRAFTER

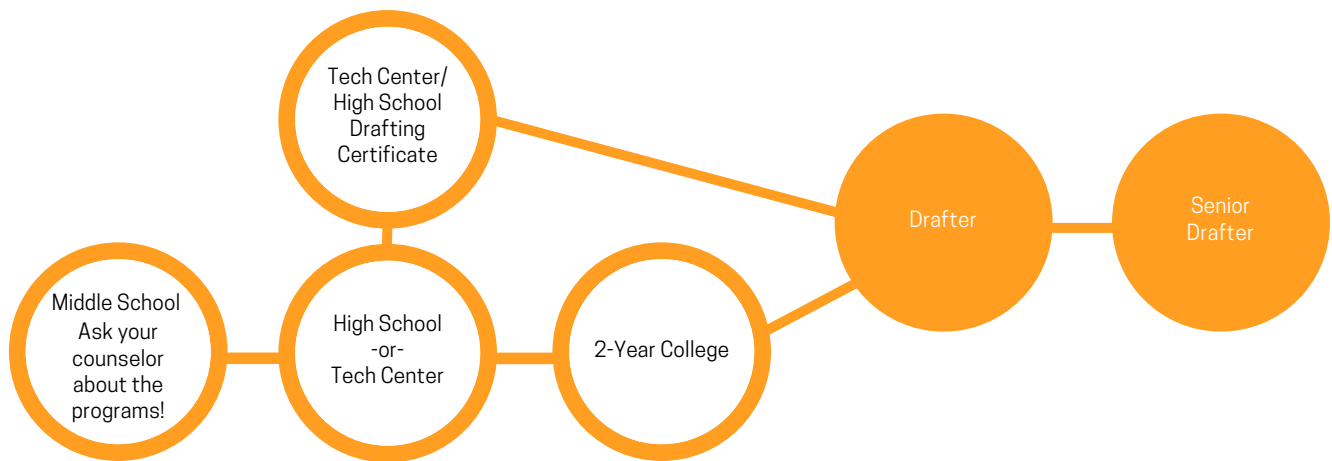
CAREER - ABOUT

Architectural and Civil Drafters prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. They utilize knowledge of building materials, engineering practices, and mathematics to complete drawings.

Alternate titles: Drafter, Draftsman, Design Drafter

CAREER - PATHWAYS

To be a successful architectural or civil drafter, there are many pathways you can take. There are some entry-level jobs which students can qualify for directly after high school if you've taken advanced drafting classes at your school. There are also two-year colleges which offer degrees and certificates in drafting.



ARCHITECTURAL & CIVIL DRAFTER

HIGH SCHOOL

Students interested in pursuing a career in architectural or civil drafting can sometimes get an introduction to the field if your high school offers drafting classes. Typical software that students can be introduced to include AutoCAD, Civil 3D, MicroStation, and more. Students are also encouraged to take Geometry as that will set up a solid foundation for understanding modeling.

Suggested Specialty Courses:

Drafting and Computer Aided Design and Drawing

Many school districts offer specialty courses or programs geared toward drafting. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE

Architectural Technology (A.A.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪ (607) 587-4692

alfredstate.edu/architectural-tech

Finger Lakes Community College

Architectural Design & Drafting (A.A.S.)

3325 Marvin Sands Dr ▪ Canandaigua, NY 14424 ▪ (585) 785-1000

flcc.edu/academics/architectural-technology

MONROE COMMUNITY COLLEGE

Computer Aided Design & Drafting (Certificate)

1000 East Henrietta Road ▪ Rochester, NY 14623 ▪ (585) 292-2200

monroecc.edu/academics/majors-programs/stem/computer-aided-design-and-drafting/

ROCHESTER INSTITUTE OF TECHNOLOGY

Computer Aided Drafting Technology (A.O.S.)

One Lomb Memorial Drive ▪ Rochester, NY 14623 ▪ (585) 475-4956

rit.edu/study/architectural-and-civil-drafting-technology-aos

COLLEGES: 4-YEAR PROGRAMS

ALFRED STATE COLLEGE

Architectural Technology (B.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪ (607) 587-4692

alfredstate.edu/architectural-tech



BOILERMAKER

CAREER - ABOUT

Boilermakers construct, assemble, maintain, and repair stationary steam boilers and boiler house auxiliaries. They align structures or plate sections to assemble boiler frame tanks or vats, following blueprints. Work involves use of hand and power tools, plumb bobs, levels, wedges, dogs, and/or turnbuckles. They assist in testing assembled vessels. Direct cleaning of boilers and boiler furnaces, inspection and repair of boiler fittings, such as safety valves, regulators, automatic-control mechanisms, water columns, and auxiliary machines are all included in boilermakers repertoire.

INTERNATIONAL UNION

INTERNATIONAL BROTHERHOOD OF BOILERMAKERS, IRON SHIP BUILDERS, BLACKSMITHS, FORGERS AND HELPERS

The Boilermakers are a diverse union of workers with a presence in construction, maintenance and manufacturing. Boilermakers build and repair ships, fishing boats, ferries, barges, plate and structural fabrications, cranes, boilers, tanks and pressure vessels. These skilled workers often use acetylene torches, power grinders and many forms of welding, burning, cutting, rigging, layout and bolting. It's hard work, and heavy lifting and dedication to the craft is required.

boilermakers.org

LOCAL UNION

BOILERMAKERS LOCAL LODGE #7

(716) 667-0861

boilermakerslocal5.com/zone-7



BOILERMAKER

APPRENTICESHIP APPLICATION REQUIREMENTS

To be considered for our program, applicants **MUST** pickup applications in person and return the application and requested documentation to the NE Area office via certified mail/return receipt requested within ten (10) business days. It is our strict policy **NOT** to mail or email applications.

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While You Learn: Wages and benefits increase every six months during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

LOCAL LODGE NO. 5, ZONE 7

5745 Big Tree Road, Orchard Park, NY 14127
(716) 667-0861

Applications are distributed on the **FIRST THURSDAY** of EVERY MONTH from 9:00 AM to 12:00 NOON. To be considered for our Program, applicants **MUST** pickup applications in person and return the application and requested documentation to the NE Area office via certified mail/return receipt requested within ten (10) business days.

The Committee requires that applicants:

- Be 18 years of age
- Must have graduated from high school, or be able to provide an equivalency certificate
- Be willing to participate in alcohol and drug testing within 48 hours after signing the apprenticeship agreements
- Have reliable transportation to the related instructions and to travel long distances to job sites
- Be physically able to perform the usual tasks required in the Boilermaker Trade as determined by a verbal declaration
- *Applicants possessing written proof of welding qualifications or training will be given priority selection over those with no welding qualifications or training.*



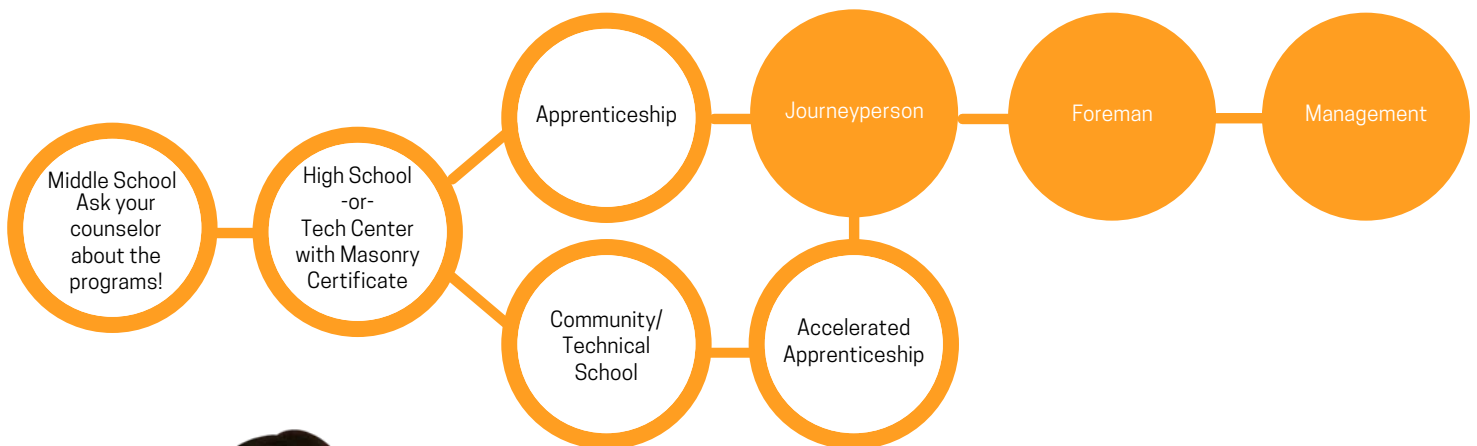
BRICKLAYER & ALLIED CRAFTWORKERS

CAREER - ABOUT

Brick masons, block masons, and stone masons create attractive, durable surfaces and structures. For thousands of years, these workers have built buildings, fences, roads, walkways, and walls using bricks, concrete blocks, and natural stone. The structures that they build will continue to be in demand for years to come. The work varies in complexity, from laying a simple masonry walkway to installing an ornate exterior on a highrise building. These workers use their own perceptions and a variety of tools to ensure that the structure meets the desired standards.

Alternate Titles: Brick/Block/Stone Mason, Mason, Mason Apprentice, Cement Masons, Tile Setters, Plasterers

CAREER - PATHWAYS



HIGH SCHOOL

Many school districts offer specialty courses or programs geared toward masonry. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE **Masonry (A.O.S.)**

Upper College Drive ▪ Alfred, NY 14802 ▪ (607) 587-4692
alfredstate.edu/masonry

BRICKLAYER & ALLIED CRAFTWORKERS



LOCAL UNION

BRICKLAYERS AND ALLIED CRAFTWORKERS LOCAL #3

(585) 641-750

bac3ny.com

INTERNATIONAL UNION

International Union of Bricklayers and Allied Craftworkers

BAC represents all skilled trowel trades workers, including bricklayers, tile setters, plasterers, cement masons, marble masons, restoration workers, stonemasons, helpers or finishers, terrazzo and mosaic workers. Their work includes buildings, homes, stadiums, monuments and landmarks throughout the United States and Canada.

bacweb.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While You Learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications must be completed on-site in person at:

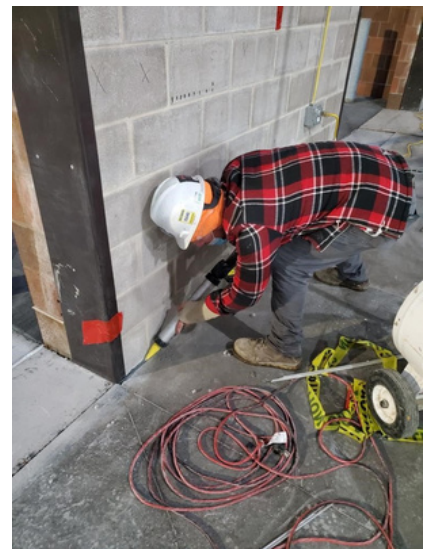
Local Union #3

33 Saginaw Drive, Rochester, NY 14623

The Local #3 JATC Rochester Chapter accepts applications every day of the month (Mon-Fri) from 8:30 am until 4:00 pm.

The Committee requires that applicants:

- Must be Eighteen (18) years of age at time of employment
- Must have reliable transportation to and from school and work.
- Must have a Social Security Card at time of employment.
- Must have a Birth Certificate at time of employment.
- Will be drug tested and a physical exam is required upon employment.

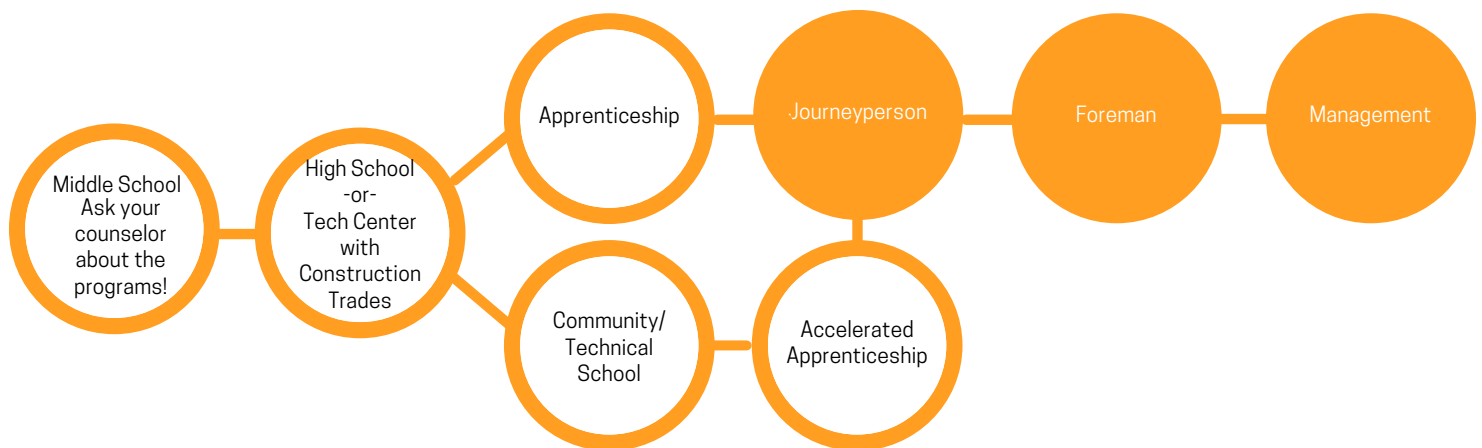


CARPENTER

CAREER - ABOUT

Carpenters are involved in many different kinds of construction, from the building of highways and bridges to the installation of kitchen cabinets. Carpenters construct, erect, install, and repair structures and fixtures made from wood and other materials. Working from blueprints or instructions from supervisors, carpenters first do the layout – measuring, marking, and arranging materials – in accordance with local building codes. They cut and shape wood, plastic, fiberglass, or drywall using hand and power tools, such as chisels, planes, saws, drills, and sanders. They then join the materials with nails, screws, staples, or adhesives. In the last step, carpenters do a final check of the accuracy of their work with levels, rules, plumb bobs, framing squares, and surveying equipment, and make any necessary adjustments.

CAREER - PATHWAYS



HIGH SCHOOL

Many school districts offer specialty courses or programs geared toward carpentry and general construction trades. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES

ALFRED STATE COLLEGE

Building Trades: Building Construction (A.O.S)

Upper College Drive ▪ Alfred, NY 14802 ▪ (607) 587-4692

alfredstate.edu/building-trades

MONROE COMMUNITY COLLEGE

Construction Essentials Certificate

1000 East Henrietta Road ▪ Rochester, NY 14623 ▪ (585) 292-2200

workforceforward.com/professional-development/skilled-trades-courses/construction-essentials-sections/



CARPENTER

LOCAL UNION

CARPENTERS LOCAL #276

(585) 436-1110

carpenterslocalunion276.com



INTERNATIONAL UNION

UNITED BROTHERHOOD OF CARPENTERS AND JOINERS OF AMERICA (& MILLWRIGHTS)

Members of the UBC are commercial and residential carpenters, floor layers, millwrights, pile drivers, interior systems and cabinetmakers. They build forms for concrete and frame buildings, walls, footings, columns and stairs. Carpenters also install doors, windows, storefronts, build cabinets, counter tops and finished stair handrails. Carpenters must read blueprints, measure accurately and calculate dimensions.

carpenters.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

To apply for the Apprenticeship program you must attend one of our information sessions. Go to www.nasctf.org for more information.

As an interested applicant for the Apprenticeship Program, it is your responsibility to complete all of the following mandatory requirements:

- Provide copies of proof of age (minimum 17 years of age). Birth certificate preferred (Driver's License, Passport or Green Card are also acceptable).

AND

- Provide copies of documentation of high school graduation and transcript for high school, or completion of a GED with applicable scores. (High school seniors must provide transcripts and a letter from their schools stating that they are eligible to graduate within three months).

OR

- Applicants must provide proof of satisfactory completion of a pre-job preparatory course in Carpentry of at least six (6) months, such as United Brotherhood of Carpenters (UBC), Job Corps, or other approved carpentry pre-apprentice or apprentice preparatory course.

OR

- Verifiable Proof of having worked a minimum of 1,500 hours in the carpentry trade would qualify an applicant as having met the minimum educational requirements. Applicant must provide proper documentation that defines their experience in the trade. This documentation must be comprised of official documents such as tax/payroll records notarized letters of experience confirmation and sworn statements.

CIVIL ENGINEER & ENGINEERING TECHNICIAN

CAREER - ABOUT

Civil engineers design and supervise the construction of roads, buildings, airports, tunnels, dams, bridges, and water supply and sewage systems. They must consider many factors in the design process, from the construction costs and expected lifetime of a project to government regulations and potential environmental hazards such as earthquakes and hurricanes. Civil engineering, considered one of the oldest engineering disciplines, encompasses many specialties.

Alternate Titles: Structural Engineers, Geotechnical Engineers

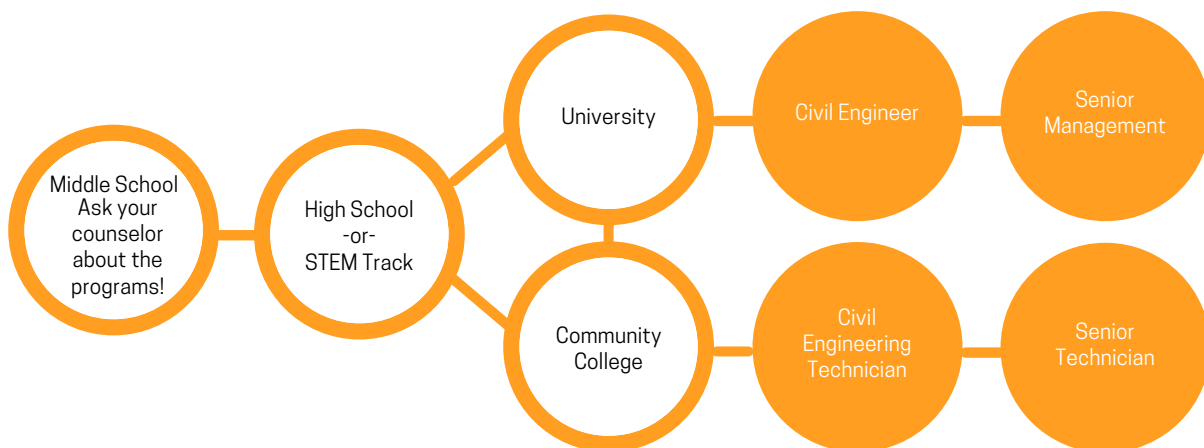
Civil engineering technicians help civil engineers plan and oversee the building of highways, buildings, bridges, dams, wastewater treatment systems, and other structures and provide related research. Some estimate construction costs and specify materials to be used, and some may even prepare drawings or perform land-surveying duties. Others may setup and monitor instruments used to study traffic conditions.

Alternate Titles: Structural Designer, Environmental Technician, Engineering Technician, Design Drafter, Soils Testing Technician, Water and Wastewater Testing Technician, Highway Construction Technician, Quality Control Technician, Construction Inspector

CAREER - PATHWAYS

Civil engineers are required to have a minimum of a bachelors degree. Professional engineering licensing is available for civil engineers, however it is sometimes optional if you are working under a senior engineer.

Civil engineering technicians are suggested to obtain an associate's degree or certificate from a 2-year or trade program.



CIVIL ENGINEER & ENGINEERING TECHNICIAN

HIGH SCHOOL

Students interested in pursuing a career in civil engineering should pursue STEM courses.

Suggested Specialty Courses:

Calculus and Physics

Many school districts offer specialty courses or programs geared toward STEM. Contact your counselor to find out how you can participate in your school's programs.

CONTACTS

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) ROCHESTER, NY

ASCErochester@gmail.com
sections.asce.org/rochester

AMERICAN COUNCIL OF ENGINEERING (ACEC) NEW YORK

ACECNY@ACECNY.ORG
acecny.org/page/rochester

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE

Construction Engineering Technology (A.A.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪ (607) 587-4692
catalog.alfredstate.edu/current/programs/construction-engineering-technology

CORNING COMMUNITY COLLEGE

Engineering Science (A.S.)

1 Academic Drive ▪ Corning, NY 14830 ▪ (607) 962-9220
corning-cc.edu/academics/engineering-science/index.php

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Civil Engineering Technology (A.A.S.)

Voorhees Hall 433 (V-433) ▪ 186 Jay Street ▪ Brooklyn, NY 11201 ▪ (718) 260-5338
citytech.cuny.edu/construction-engineering/civil-engineering-aas.aspx#

ERIE COMMUNITY COLLEGE

Civil Engineering Technology (A.S.)

North Campus, Room B502B ▪ 6205 Main Street ▪ Williamsville, NY 14221 ▪ (716) 851-4439
ecc.edu/academics/civil-engineering-technology.html

GENESEE COMMUNITY COLLEGE

Engineering Science (A.S.)

1 College Road ▪ Batavia, NY 14020 ▪ (585) 343-0055 x6303
genesee.edu/academics/programs/tech/EngSci



CIVIL ENGINEER & ENGINEERING TECHNICIAN

COLLEGES: 2-YEAR PROGRAMS, *CONTINUED*

ERIE COMMUNITY COLLEGE

Civil Engineering Technology (A.S.)

North Campus, Room B502B ▪ 6205 Main Street ▪ Williamsville, NY 14221 ▪

(716) 851-4439

ecc.edu/academics/civil-engineering-technology.html

GENESEE COMMUNITY COLLEGE

Engineering Science (A.S.)

1 College Road ▪ Batavia, NY 14020 ▪

(585) 343-0055 x6303

genesee.edu/academics/programs/tech/EngSci

HUDSON VALLEY COMMUNITY COLLEGE

Civil Engineering Technology (A.A.S.)

80 Vandenberg Avenue ▪ Troy, NY 12180 ▪

(518) 629-7358 ▪ EACM@hvcc.edu

hvcc.edu/programs/all/stem/civil-engineering-technology-aas.html

JAMESTOWN COMMUNITY COLLEGE

Engineering Science (A.S.)

525 Falconer Street ▪ Jamestown, NY 14702 ▪

(716) 338-1001

sunyjcc.edu/programs/engineering-science-as

JEFFERSON COMMUNITY COLLEGE

Engineering Science (A.S.)

Coffeen Street ▪ Watertown, NY 13601 ▪

(315) 786-2437

sunyjefferson.edu/academics/programs/engineering-science-as.php

MOHAWK VALLEY COMMUNITY COLLEGE

Engineering Science (A.S.)

1101 Sherman Drive ▪ Utica, NY 13501 ▪

(315) 792-5400

mvcc.edu/academics/stem/engineering-science/index.php

MONROE COMMUNITY COLLEGE

Engineering Science (A.S.)

1000 East Henrietta Road ▪ Rochester, NY 14623 ▪ (585) 292-2200

monroecc.edu/academics/majors-programs/stem/engineering-science-associate-degree/

NASSAU COMMUNITY COLLEGE

Civil Engineering Technology (A.A.S.)

One Education Drive ▪ Garden City, NY 11530 ▪

(516) 572-7501

collegecatalog.ncc.edu/current/programs/engineering_physics_technologies/civil_engineering_technology_aas.html

ROCHESTER INSTITUTE OF TECHNOLOGY

Civil Technology (A.A.S.)

One Lomb Memorial Drive ▪ Rochester, NY

14623 ▪ (585) 286-4546

rit.edu/study/civil-technology-aas

SUNY BROOME

Civil Engineering Technology (A.A.S.)

Mechanical Building 117 ▪ P.O. Box 1017 ▪

Binghamton, NY 13902 ▪ (607) 778-5000

sunybroome.edu/programs/cet

SUNY CANTON

Civil Engineering Technology (A.A.S.)

34 Cornell Drive ▪ Canton, NY 13617 ▪

(315) 386-7313

canton.edu/csoet/civil

SUNY WESTCHESTER COMMUNITY COLLEGE

Civil Technology (A.A.S.)

75 Grasslands Road ▪ Valhalla, NY 10595 ▪

(914) 606-8561

sunywcc.edu/academics/programs/civil-technology-aas

CIVIL ENGINEER & ENGINEERING TECHNICIAN

COLLEGES: 4-YEAR PROGRAMS

CLARKSON UNIVERSITY

Civil Engineering (B.S.)

8 Clarkson Avenue ▪ Potsdam, NY 13699 ▪
(315) 268-6400

clarkson.edu/undergraduate/civil-engineering

COLUMBIA UNIVERSITY

Civil Engineering (B.S.)

500 West 120th Street, 610 Mudd ▪ New York,
NY 10027 ▪ (212) 854-2993

civil.columbia.edu/civil-engineering-program

CORNELL UNIVERSITY

Civil and Environmental Engineering

Hollister Hall ▪ Ithaca, NY 14853 ▪
(607) 255-3412

cee.cornell.edu/cee/programs/undergraduate-programs/civil-engineering-major

NEW YORK UNIVERSITY

Civil Engineering (B.S.)

6 MetroTech Center ▪ Brooklyn, NY 11201 ▪
(646) 997-3600

engineering.nyu.edu/academics/programs/civil-engineering-bs

ROCHESTER INSTITUTE OF TECHNOLOGY

Civil Engineering Technology (B.S.)

One Lomb Memorial Drive ▪ Rochester, NY
14623 ▪ (585) 475-4956

rit.edu/study/civil-engineering-technology-bs

SUNY BUFFALO

Civil Engineering (B.S.)

212 Ketter Hall ▪ North Campus ▪ Buffalo, NY
14260 ▪ (716) 645-2114

engineering.buffalo.edu/civil-structural-environmental/undergraduate/bs-civil-engineering.html

SUNY CANTON

Civil & Environmental Engineering Technology (B.Tech)

34 Cornell Drive ▪ Canton, NY 13617 ▪
(315) 386-7163

canton.edu/csoet/cet

SUNY POLYTECHNIC INSTITUTE

Civil Engineering (B.S.), Civil Engineering Technology (B.S.)

100 Seymour Road ▪ Utica, NY 13502 ▪
(315) 792-7234

sunypoly.edu/academics/majors-and-programs/civil-engineering.html

UNITED STATES MILITARY ACADEMY WEST POINT

Civil Engineering (B.S.)

606 Thayer Road ▪ West Point, NY 10996 ▪
(845) 938-4041

westpoint.edu/academics/academic-departments/civil-and-mechanical-engineering/civil-engineering



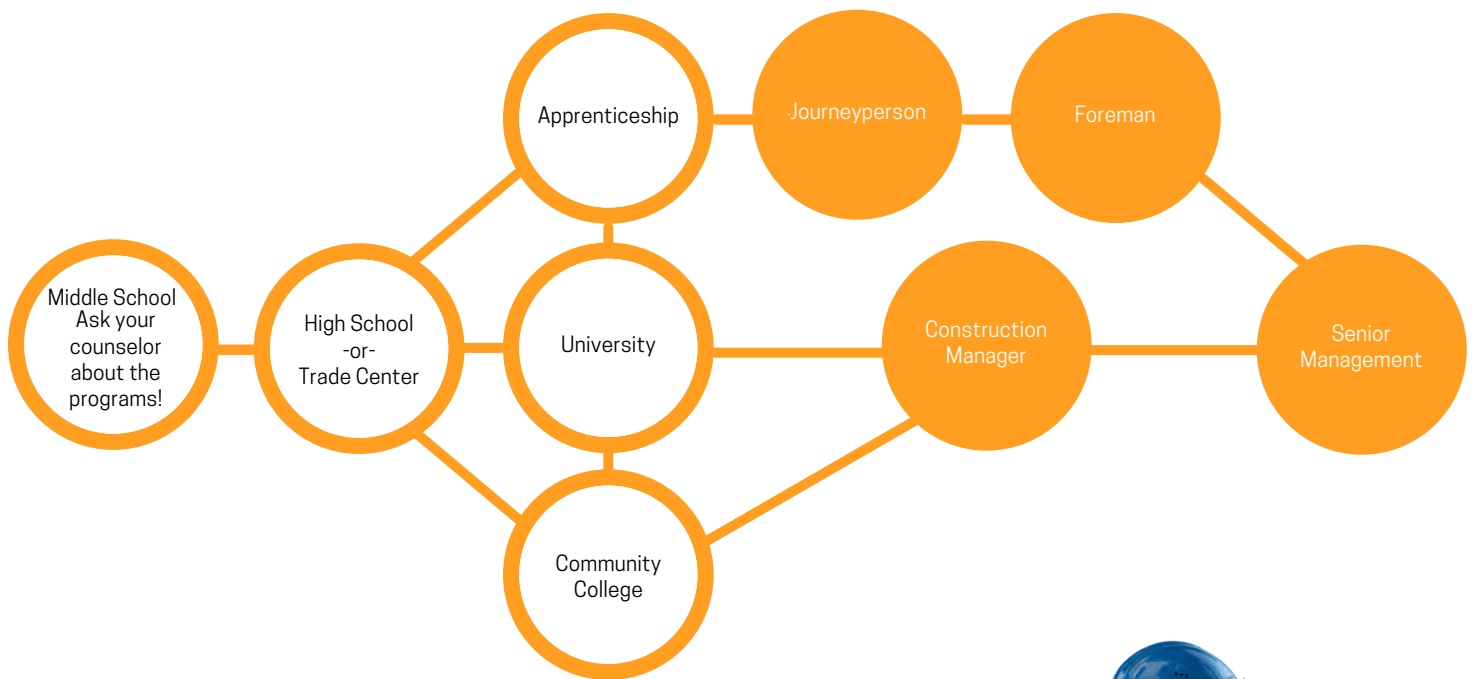
CONSTRUCTION MANAGER

CAREER - ABOUT

Construction managers plan, direct, and coordinate a wide variety of construction projects, including the building of all types of residential, commercial, and industrial structures, roads, bridges, wastewater treatment plants, schools and hospitals. Construction managers may oversee an entire project or just part of one. They schedule and coordinate all design and construction processes, including the selection, hiring, and oversight of specialty trade contractors.

CAREER - PATHWAYS

There are several pathways to become a construction manager. The region has both two- and four-year colleges which offer Construction Management degrees. Whether employers require bachelors degrees varies, however more employers do list that as a requirement. You can also pursue a Project Management Professional (PMP) license when you gain jobsite experience with or without a degree.



CONSTRUCTION MANAGER

HIGH SCHOOL

Students interested in pursuing a career as a construction manager can start to pursue that field in high school. Many school districts offer specialty courses or programs geared toward general construction trades. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE

Construction Engineering Technology (A.A.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪ (607) 587-4612

catalog.alfredstate.edu/current/programs/construction-engineering-technology

Building Trades: Building Construction (A.O.S.)

2530 South Brooklyn Avenue ▪ Wellsville, NY 14895 ▪ (607) 587-4130

<http://www.alfredstate.edu/building-trades>

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Construction Management Technology (A.A.S.)

Voorhees Hall 433 (V-433) ▪ 186 Jay Street ▪ Brooklyn, NY 11201

(718) 260-5338

citytech.cuny.edu/construction-engineering/construction-management-aas.aspx#

ERIE COMMUNITY COLLEGE

Building Trades / Residential Light Commercial (Certificate)

City Campus, Room G57 ▪ 121 Ellicott Street ▪ Buffalo, NY 14203 ▪ (716) 851-1025

ecc.edu/academics/building-trades-residential-light-commercial.html

Construction Management Engineering Technology

North Campus, Room B502B ▪ 6205 Main Street ▪ Williamsville, NY 14221 ▪ (716) 851-1542

ecc.edu/academics/construction-management-engineering-technology.html

FULTON-MONTGOMERY COMMUNITY COLLEGE

Construction Technology: Sustainable Building (A.A.S.)

2805 State Highway 67 ▪ Johnstown, NY 12095 ▪ (518) 736-3622

fmcc.edu/academics/academic_programs/construction-technology-aas---0540/

HUDSON VALLEY COMMUNITY COLLEGE

Construction Technology - Building Construction (A.A.S.)

Lang Technical Building, Room 106 ▪ 80 Vandenberg Avenue ▪ Troy, NY 12180 ▪ (518) 629-8003

hvcc.edu/programs/all/stem/construction-technology-building-construction-aas.html

MONROE COMMUNITY COLLEGE

Construction Technology

Brighton Campus, Building 8, Room 626 ▪ 1000 East Henrietta Road ▪ Rochester, NY 14623 (585) 292-2002

monroecc.edu/academics/majors-programs/stem/construction-technology-associate-degree/

NASSAU COMMUNITY COLLEGE

Construction Management (Certification)

One Education Drive ▪ Garden City, NY 11530 ▪ (516) 572-7501

collegecatalog.ncc.edu/current/programs/engineering_physics_technologies/construction_management_cert.html

CONSTRUCTION MANAGER

COLLEGES: 2-YEAR PROGRAMS, *CONTINUED*

PRATT INSTITUTE

Building and Construction (A.A.S.)

200 Willoughby Avenue ▪ Brooklyn, NY 11205 ▪
(212) 647-7524

[pratt.edu/academics/architecture/
construction-management/construction-
degrees/building-and-construction-aas/](http://pratt.edu/academics/architecture/construction-management/construction-degrees/building-and-construction-aas/)

SUFFOLK COUNTY COMMUNITY COLLEGE

Construction Technology, Architectural Technology (A.A.S.)

533 College Road ▪ Selden, NY 11784 ▪
(631) 451-4000

sunysuffolk.edu/curricula/CTAT-AAS.asp

SUNY CANTON

Construction Technology; Management (A.A.S.)

34 Cornell Drive ▪ Canton, NY 13617 ▪
(315) 386-7131

canton.edu/csoet/cons

SUNY DELHI

Construction Technology (A.A.S.)

454 Delhi Drive ▪ Delhi, NY 13753 ▪
(800) 96DELHI

[delhi.edu/academics/majors-
programs/associates/construction-
technology/index.php](http://delhi.edu/academics/majors-programs/associates/construction-technology/index.php)

SUNY DUTCHESS COMMUNITY COLLEGE

Construction Technology Management (A.A.S.)

53 Pendell Road ▪ Poughkeepsie, NY 12601 ▪
(845) 431-8000

[sunydutchess.edu/academics/catalog/current/
/programs/architectureandconstructiontechn
ologies/cns.html](http://sunydutchess.edu/academics/catalog/current/programs/architectureandconstructiontechnologies/cns.html)

SUNY ONONDAGA COMMUNITY COLLEGE

Apprentice Training: Building Trades (A.A.S.)

4585 West Seneca Turnpike ▪ Syracuse, NY
13215 ▪ (315) 498-2000

[sunyocc.edu/programs/apprentice-training-
building-trades-aas](http://sunyocc.edu/programs/apprentice-training-building-trades-aas)

TOMPKINS CORTLAND COMMUNITY COLLEGE

Construction and Environmental Technology (A.A.S.)

170 North Street ▪ Dryden, NY 13053 ▪
(607) 844-6580

[tompkincortland.edu/academics/programs/
construction-and-environmental-technology](http://tompkincortland.edu/academics/programs/construction-and-environmental-technology)

CONSTRUCTION MANAGER

COLLEGES: 4-YEAR PROGRAMS

ALFRED STATE COLLEGE

Construction Management (B.S.)

Upper College Drive ▪ Alfred, NY 14802
catalog.alfredstate.edu/current/programs/construction-management

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Construction Technology (B.Tech.)

Voorhees Hall 433 (V-433) ▪ 186 Jay Street ▪ Brooklyn, NY 11201 ▪ (718) 260-5338
citytech.cuny.edu/construction-engineering/construction-technology-btech.aspx#

FARMINGDALE STATE COLLEGE

Construction Management Engineering Technology (B.S.)

Luptin Hall ▪ 2350 Broadhollow Road ▪ Farmingdale, NY 11735 ▪ (631) 420-2024
farmingdale.edu/curriculum/bs-con.shtml

PRATT INSTITUTE

Construction Management (B.P.S.)

200 Willoughby Avenue ▪ Brooklyn, NY 11205 ▪ (212) 647-7524
pratt.edu/academics/architecture/construction-management/construction-degrees/construction-management-b.p.s

SUNY Delhi

Construction Management: Design and Building (B.Tech.)

454 Delhi Drive ▪ Delhi, NY 13753 ▪ (800) 96DELHI
delhi.edu/academics/majors-programs/bachelors/construction-management/index.php

SUNY COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY

Construction Management (B.S.)

1 Forestry Drive ▪ Syracuse, NY 13210 ▪ (315) 470-6500
esf.edu/fnrm/cm

UTICA COLLEGE

Construction Management (B.S.)

1600 Burrstone Road ▪ Utica, NY 13502 ▪ (315) 792-3006
utica.edu/academics/programs/construction-management



ELECTRICAL ENGINEER & ENGINEERING TECHNICIAN

CAREER - ABOUT

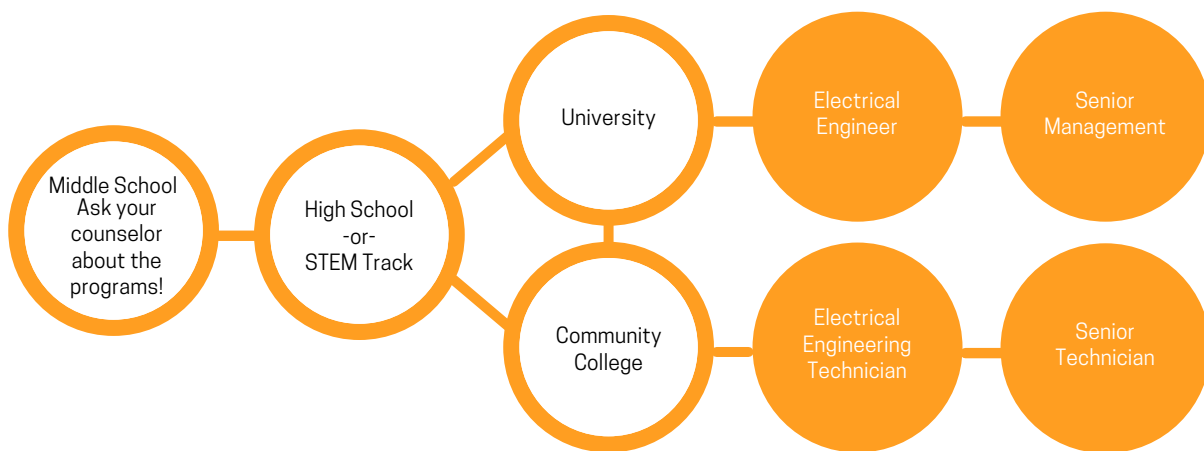
Electrical engineers design, develop, test, and supervise the manufacture of electrical equipment. Some of this equipment includes electric motors; machinery controls, lighting, and wiring in buildings; automobiles; aircraft; radar and navigation systems; and power generation, control, and transmission devices used by electric utilities. Electrical engineers have traditionally focused on the generation and supply of power, specializing in areas such as power systems engineering or electrical equipment manufacturing.

Electrical and electronic engineering technologists and technicians help electrical and electronics engineers plan and develop communications equipment, computers, medical monitoring devices, or other equipment that is powered by other electricity or electric current. They often work in product evaluation and testing, using measuring and diagnostic devices to test, adjust, and repair equipment. They are also involved in assembling equipment for automation.

CAREER - PATHWAYS

Electrical engineers are required to obtain a minimum of a bachelors degree. Professional engineering licensing is available for electrical engineers who have completed a bachelors or masters degree program and is required for certain utility work.

Electrical engineering technicians are suggested to obtain an associate's degree or certificate from a 2-year college or trade program.



ELECTRICAL ENGINEER & ENGINEERING TECHNICIAN

HIGH SCHOOL

Students interested in pursuing a career in electrical engineering should pursue STEM courses. Algebra and other advanced math courses can also be completed during college coursework.

Suggested Specialty Courses:

Calculus and Physics

Many school districts offer specialty courses or programs geared toward STEM. Contact your counselor to find out how you can participate in your school's programs.

CONTACTS

AMERICAN COUNCIL OF ENGINEERING (ACEC) NEW YORK

ACECNY@ACECNY.ORG

acecny.org/page/rochester



ELECTRICAL ENGINEER & ENGINEERING TECHNICIAN

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE

Electrical Engineering Technician (A.A.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪
(607) 587-4692

catalog.alfredstate.edu/current/programs/electrical-engineering-technology

CORNING COMMUNITY COLLEGE

Electrical Technology-Electronics (A.A.S.)

1 Academic Drive ▪ Corning, NY 14830 ▪
(607) 962-9220

corning-cc.edu/academics/electrical-technology-electronics/index.php

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Electrical Engineering Technology (A.A.S.)

Voorhees Hall 433 (V-734) ▪ 186 Jay Street ▪
Brooklyn, NY 11201 ▪ (718) 260-5305

citytech.cuny.edu/electrical-telecomm/electrical-technology-aas.aspx

ERIE COMMUNITY COLLEGE

Engineering Science (A.S.)

North Campus, Room B102C ▪ 6205 Main
Street ▪ Williamsville, NY 14221 ▪
(716) 851-1558

ecc.edu/academics/engineering-science.html

HUDSON VALLEY COMMUNITY COLLEGE

Electrical Engineering Technology-Electronics (A.A.S.)

Cogan Hall, Room 145 ▪ 80 Vandenburg
Avenue ▪ Troy, NY 12180 ▪ (518) 629-7272

hvcc.edu/programs/all/stem/electrical-engineering-technology-electronics-aas.html

MOHAWK VALLEY COMMUNITY COLLEGE

Electrical Engineering Technology (A.A.S.)

1101 Sherman Drive ▪ Utica, NY 13501 ▪
(315) 792-5400

mvcc.edu/academics/stem/electrical-engineering/index.php

MONROE COMMUNITY COLLEGE

Electrical Engineering Technology - Electronics (A.A.S.)

Brighton Campus, Building 8, Room 626 ▪ 1000
East Henrietta Road ▪ Rochester, NY 14623 ▪
(585) 292-2200

monroecc.edu/academics/majors-programs/stem/electrical-engineering-technology-associate-of-applied-science

NASSAU COMMUNITY COLLEGE

Electrical Engineering Technology (A.A.S.)

One Education Drive ▪ Garden City, NY 11530 ▪
(516) 572-7501

collegecatalog.ncc.edu/current/programs/engineering_physics_technologies/electrical_engineering_technology_aas.html

SUNY BROOME

Electrical Engineering Technology (A.A.S.)

Mechanical Building 117 ▪ P.O. Box 1017 ▪
Binghamton, NY 13902 ▪ (607) 778-5010

sunnybroome.edu/programs/eet

SUNY CANTON

Electrical Engineering Technology (A.A.S.)

34 Cornell Drive ▪ Canton, NY 13617 ▪
(315) 386-7213

canton.edu/csoet/electrical

SUNY WESTCHESTER COMMUNITY COLLEGE

Electrical Technology (A.A.S.)

75 Grasslands Road ▪ Valhalla, NY 10595 ▪
(914) 606-8561

sunnywcc.edu/academics/programs/electrical-technology-aas

ELECTRICAL ENGINEER & ENGINEERING TECHNICIAN

COLLEGES: 4-YEAR PROGRAMS

ALFRED STATE COLLEGE

Electrical Engineering Technology (B.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪
(607) 587-4692
alfredstate.edu/electrical-engineering-technology

CLARKSON UNIVERSITY

Electrical Engineering (B.S.)

8 Clarkson Avenue ▪ Potsdam, NY 13699 ▪
(315) 268-6480
clarkson.edu/undergraduate/electrical-engineering

COLUMBIA UNIVERSITY

Electrical Engineering (B.S.)

500 West 120th Street, Mudd 1310 ▪ New York, NY 10027 ▪ (212) 854-3105
ee.columbia.edu/undergraduate-program-0

CORNELL UNIVERSITY

Electrical and Computer Engineering (B.S.)

Phillips Hall, Room 222 ▪ Ithaca, NY 14853 ▪
(607) 255-9442
ece.cornell.edu/ece/programs/undergraduate-programs

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Electrical & Telecommunications Engineering Technology (B.Tech.)

186 Jay Street ▪ Brooklyn, NY 11201 ▪ (718) 260-5305
citytech.cuny.edu/electrical-telecomm/electrical-technology-btech.aspx

NEW YORK UNIVERSITY

Electrical Engineering (B.S.)

6 MetroTech Center ▪ Brooklyn, NY 11201 ▪
(646) 997-3600
engineering.nyu.edu/academics/programs/electrical-engineering-bs

Rochester Institute of Technology

Electrical Engineering (B.S.)

One Lomb Memorial Drive ▪ Rochester, NY 14623 ▪ (585) 475-2165
rit.edu/study/electrical-engineering-bs

SUNY BUFFALO

Electrical Engineering (B.S.)

230 Davis Hall ▪ North Campus ▪ Buffalo, NY 14260 ▪ (716) 645-2114
engineering.buffalo.edu/ee/academics/bachelors_ee.html

SUNY CANTON

Electrical Engineering Technology (B.Tech.)

34 Cornell Drive ▪ Canton, NY 13617 ▪
(315) 386-7211
canton.edu/csoet/elec

SUNY POLYTECHNIC INSTITUTE

Electrical Engineering Technology (B.S.)

100 Seymour Road ▪ Utica, NY 13502 ▪
(315) 792-7349

sunypoly.edu/academics/majors-and-programs/electrical-engineering-technology.html

Electrical & Computer Engineering (B.S.)

<https://sunypoly.edu/academics/majors-and-programs/electrical-computer-engineering.html>

UNITED STATES MILITARY ACADEMY WEST POINT

Electrical Engineering (B.S.)

606 Thayer Road ▪ West Point, NY 10996 ▪
(845) 938-4041
westpoint.edu/academics/academic-departments/electrical-engineering-and-computer-science/electrical-engineering

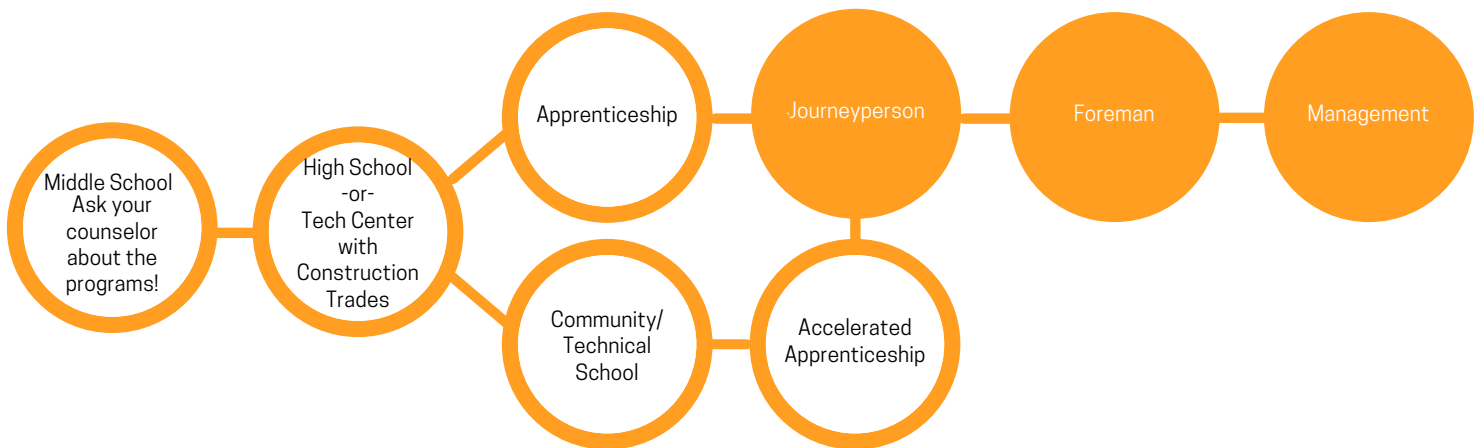
ELECTRICIAN

CAREER - ABOUT

Electricians power homes, businesses, and factories. They install and maintain the wiring, fuses, and other components through which electricity flows. Electricians generally focus on either construction or maintenance, although many do both. Electricians specializing in construction primarily install wiring systems into factories, businesses, and new homes. Electricians specializing in maintenance work, fix and upgrade existing electrical systems and repair electrical equipment.

Electrical workers work indoors and outdoors in nearly every type of facility. Almost all electricians work full time, which may include evenings and weekends. The work can be dangerous and potential injuries include electrical shocks and burns, cuts and falls.

CAREER - PATHWAYS



HIGH SCHOOL

Many school districts offer specialty courses or programs geared toward electrical construction trades. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES

See previous pages for **Electrical Engineer & Engineering Technician** for a complete list of colleges offering electrician-centered programs.

CONTACTS

National Electrical Contractors Association,
Rochester, NY
(585) 292-5190
rocneca.org

ELECTRICIAN

LOCAL UNION

INTERNATIONAL BROTHERHOOD OF ELECTRICIANS, LOCAL #86

(585) 235-5050

ibewlu86.org



INTERNATIONAL UNION

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

The IBEW represents workers in the electrical industry including construction, gas and electric utilities, telecommunications, railroads and government agencies. Construction and residential electricians work in all phases of the electrical construction and service industry. Inside wire workers install and maintain conduits, switches and converters, power distribution and lighting systems, electrical signs, fiber optics, voice/data/video equipment and more.

ibew.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 5 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications can be completed, in person only, at:

Local Union #86

470 W. Metro Park, Suite B, Rochester, NY 14623

Applications are available the 1st and 3rd Wednesdays of each month:

9 AM – Noon & 1PM – 4 PM

The Committee requires that applicants:

- 18 years of age
- High School Diploma or GED Equivalency
- One year of algebra or Course 1 and Course 2
- Upon Acceptance a mandatory physical and drug test is required.

A \$10 testing fee is required at the time of application.



ELEVATOR CONSTRUCTOR

CAREER - ABOUT

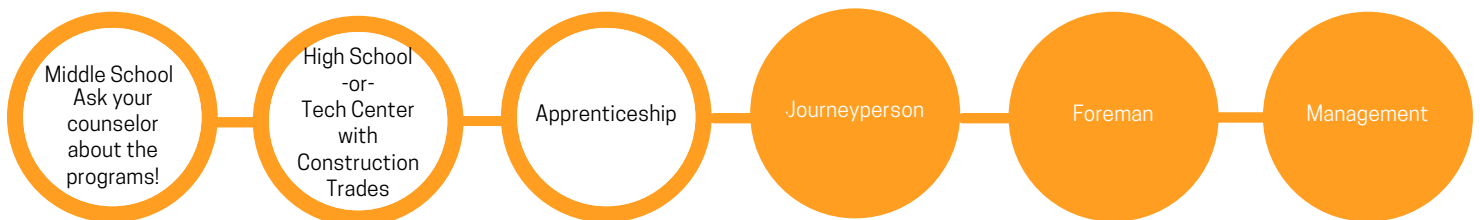
Elevator constructors will assemble, install, repair, or maintain electric or hydraulic freight or passenger elevators, escalators, or dumbwaiters. Elevator installers and repairers usually specialize in installation, maintenance, or repair work. Maintenance and repair workers generally require greater knowledge of electronics, hydraulics, and electricity than do installers because a large part of maintenance and repair work is troubleshooting. Most elevators have computerized control systems, resulting in more complex systems and troubleshooting than in the past.

Elevator installers and repairers often work in cramped quarters inside crawl spaces and machine rooms and may be exposed to heights in elevator shafts. Repairers may be required to work overtime when essential equipment needs repair and are sometimes on call 24 hours a day.

Alternative Titles: Elevator Installers and Repairers, Elevator Mechanics

CAREER - PATHWAYS

NY is gearing up to require elevator constructors to obtain a licensure ("Elevator Safety Act" is slated to be enacted in 2022). There are not currently any college programs offering courses for Elevator Constructors. Students interested in pursuing this career will need to join an apprenticeship training program in order to gain the skills needed to succeed and obtain licensure.



HIGH SCHOOL

For students interested in a career as an Elevator Installer, we recommend taking general construction-type coursework to include basic math / geometry, and any specialty courses your school may offer. Contact your counselor to find out how you can participate in your school's programs.

ELEVATOR CONSTRUCTOR



LOCAL UNION

ELEVATOR CONTRACTORS LOCAL #27

(585) 436-6440

local27@frontiernet.net

INTERNATIONAL UNION

INTERNATIONAL UNION OF ELEVATOR CONSTRUCTORS

The IUEC represent the most qualified and trained elevator constructors in the world. Members assemble, install and replace elevators, escalators, dumbwaiters, moving walkways and similar equipment in new and old buildings. Elevator constructors also maintain and repair this equipment once it is in service.

iuec.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase every six months during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications can be completed online anytime during the recruitment at:

www.neiep.org

Phone: (585) 436-6440

Email: local27@frontiernet.net

The Committee requires that applicants:

- Must be at least 18 years old.
- Must have a high school diploma or a high school equivalency diploma (such as TASC or GED).
- Must pass a drug test, at the expense of the sponsor, after selection and prior to indenture.
- Must attest to being physically capable of performing the work of the trade, which may include lifting, climbing, and working from heights without posing a threat to the health and safety of themselves or others.
- Must be a resident of Local Union #27 jurisdiction which includes the following:
 - The counties of Monroe, Wayne, Livingston, Ontario, Schuyler, Chemung, Steuben, Yates, and Seneca
- Must have reliable transportation to and from job sites and related instruction.



GLAZER & PAINTER

CAREER - ABOUT

Commercial Painter: Job duties for professional painters include removing old paint, choosing materials, selecting and mixing colors priming surfaces, applying a large variety of finishes and cleaning up job sites. Painters use many application methods including high-tech spray systems to apply leading edge coatings, along with installing vinyl wall coverings and faux finishes.

Drywall Finisher: To be a drywall finisher means you are a person who is detail oriented and meticulous. Taping drywall seams and joints is the first step to a professionally finished space and may take years for an individual to become highly proficient.

Glazier: Glaziers install glass, commercial entrances, windows, aluminum panels, and curtainwalls. To do this Glaziers must possess a wide range of knowledge and skills. The glazing trade requires the use of math every day.

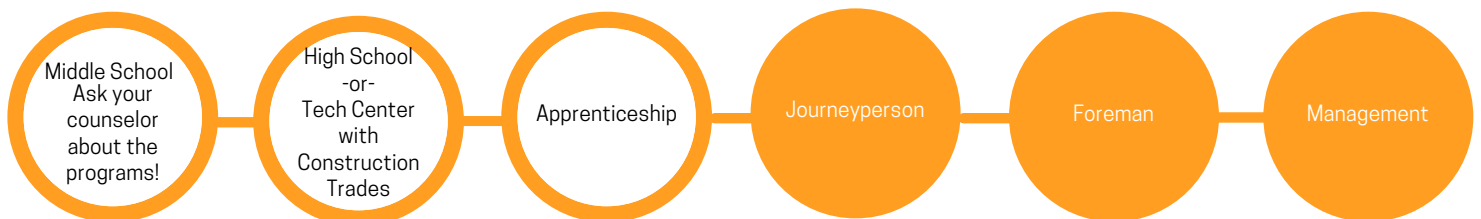
Industrial Painter (Bridge Painter): Bridge painters perform a very important role in the transportation industry. These highly skilled craftsmen & woman work outdoors, almost always in dry, warm weather and in difficult conditions.

Those who paint bridges or buildings may be exposed to extreme heights and uncomfortable positions. Workers spend most of the day standing, bending, or reaching, and they often must lift and maneuver heavy, oversized wallboards. Glaziers, painters and finishers may experience cuts from tools and glass, and falls from ladders and scaffolding. Most glaziers, painters and finishers work full time.

HIGH SCHOOL

While there are few specialty programs for painting and glazing available at local high schools, anyone interested in painting and glazing would benefit from any general construction trades programs. Contact your counselor to find out how you can participate in your school's programs.

CAREER - PATHWAYS

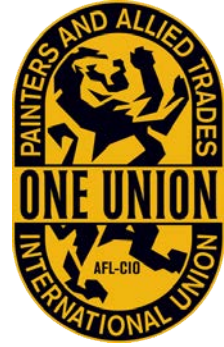


GLAZIER & PAINTER

LOCAL UNION

DC#4 FINISHING TRADES OF WESTERN NY APPRENTICESHIP & TRAINING

(585) 271-2490, info@dc4.org
dc4.org/apprenticeship-and-training/



INTERNATIONAL UNION

INTERNATIONAL UNION OF PAINTERS AND ALLIED TRADES

IUPAT members work in one or more of several crafts: painting, wallpaper hanging, glazing (glass work), drywall taping and finishing, floor covering, and sign and display work. Painters and paperhangers work in industrial, commercial and residential settings, from bridges and ships to interior walls of office buildings and homes. Drywall finishers tape, fill in and smooth seams in sheets of drywall. Glaziers prepare and install various kinds of glass, mirrors, metal framing and doors/entrances to buildings. Floor coverers work with resilient floors, as well as carpet and decorative coverings.

iupat.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase every six months during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications can be obtained online or in person at:

www.dc4.org

In person: 244 Paul Rd., Rochester, NY
from 9:00 a.m. to 4:00 p.m.

Then, mailed to:

Finishing Trades Institute of W&CNY
585 Aero Dr., Cheektowaga, NY 14225

The Committee requires that applicants:

- Must be at least 17 years old.
- Must attest in writing that they are physically capable of performing the work of the trade, which may include:
 - Climbing and working from ladders, scaffolds, poles, and towers.
 - Crawling and working in confined spaces.

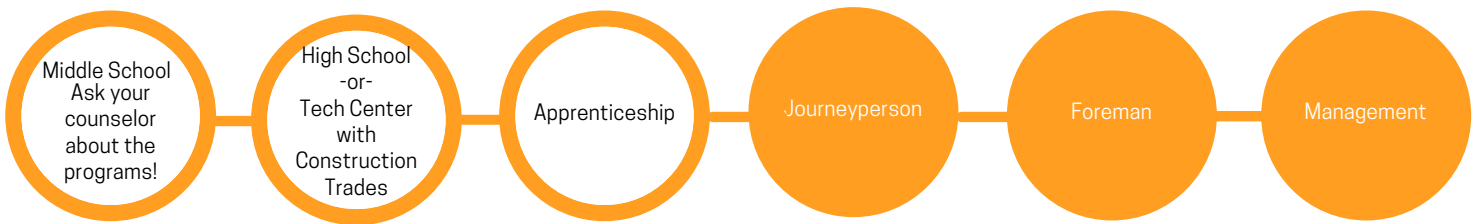
- Lifting and carrying 50 to 100 pounds.
- Walking fast on level surfaces.
- Must pass a drug screening, at the expense of the sponsor, after selection and prior to indenture.
- Must have access to reliable transportation to and from various job sites and related instruction classes. Job sites are throughout New York State. Related instruction will be in Geneva, NY, at
- one-week intervals, four times each year.
- Must possess a valid NYS driver's license in order to operate company vehicles.
- Must provide DD-214, Certificate of Release or Discharge from Active Duty, if applicable, after selection and prior to indenture.
- Applicants must reside in the counties of Livingston, Monroe, Ontario, Wayne, or Yates.

INSULATOR

CAREER - ABOUT

Insulators install many different types of insulation materials for the thermal protection of hot and cold mechanical systems. Mechanical insulation is thermal insulation used on piping, equipment and all types of mechanical systems, including boilers, HVAC systems and ducts. Insulating is performed in virtually every type of residential and commercial building in the country, as well as industrial plants, chemical facilities, nuclear as well as fossil fuel power plants, military facilities, schools, universities, strip malls and underground piping systems. Insulators apply insulating materials to piping systems, ductwork or other mechanical systems in order to prevent condensation and thermal losses. The insulation of buildings and their associated mechanical systems is a critical function in all conditioned structures.

CAREER - PATHWAYS



HIGH SCHOOL

Some high schools may have programs geared toward insulators. For those that do not have insulator programs, we recommend trying out a general construction trades program, when available to give you a general background and base skills. Contact your counselor to find out how you can participate in your school's programs.



INSULATOR

LOCAL UNION

HEAT AND FROST INSULATORS AND ALLIED WORKERS UNION LOCAL #26

(585) 323-1620

insulators26.org



INTERNATIONAL UNION

INTERNATIONAL ASSOCIATION OF HEAT AND FROST INSULATORS AND ALLIED WORKERS

Members of this union apply insulation to pipes, tanks, boilers, ducts, refrigeration equipment and other surfaces requiring thermal control of temperatures. These craftworkers manufacture, fabricate and assemble all forms of insulation. Work includes the molding, erection, spraying, pouring, mixing, hanging, application, repairing, dismantling and reconditioning of heat or frost insulation products.

insulators.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 5 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications must be obtained in person at:

Local Union #26

4348 Culver Road, Suite 3, Rochester, NY 14622

Applications are received on the first Thursday of every month, between 2:30 and 4:30 pm. You must apply in person.

The Committee requires that applicants:

- Must be at least 18 years of age and hold a valid driver's license.
- Valid New York State drivers license.
- Military transfer or discharge Form DD-214, if applicable.
- Appear for interview and aptitude test when notified.

- Recruitment, selection, employment and training will be without discrimination because of race, color, religion, national origin or sex.
- Must be able to read, hear, and understand verbal instructions and warnings given in English.
- Must be able to lift 50 lbs unassisted.
- Must be able to climb ladders and work from heights above 8 feet.
- Must be able to work in confined spaces.
- Must be able to work in cold and hot environments.
- Must be willing to attend a minimum of 144 hours of related classroom instruction per year.

IRONWORKER

CAREER - ABOUT

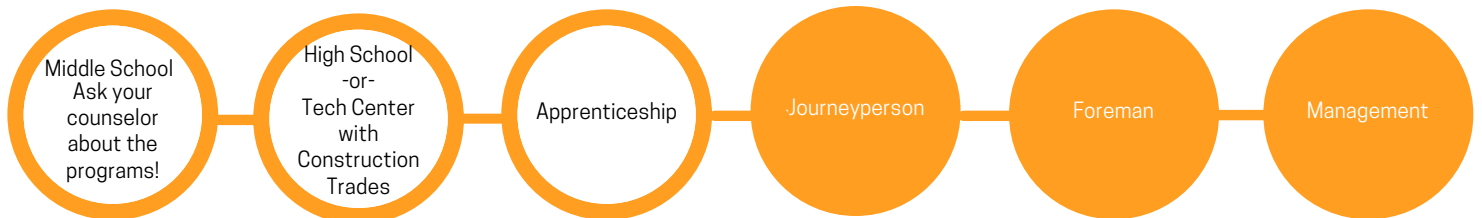
Ironworkers raise, place, and unite iron or steel girders, columns, and other structural members to form completed structures or structural frameworks. May erect metal storage tanks and assemble prefabricated metal buildings.

Ironworkers perform physically demanding and dangerous work, often working at great heights. As a result, workers must wear safety harnesses to reduce the risk of falling and other equipment to ensure safety.

Alternate Titles: Structural Iron & Steel Workers, Iron Workers Apprentice, Journeyman Iron Worker



CAREER - PATHWAYS



HIGH SCHOOL

While there are few specialty programs for ironworkers available at local high schools, anyone interested in becoming an ironworker would benefit from any general construction trades programs. Contact your counselor to find out how you can participate in your school's programs.



IRONWORKER

LOCAL UNION

IRONWORKERS LOCAL #33

650 Trabold Road, Rochester, NY 14624

ironworkers33.org



INTERNATIONAL UNION

INTERNATIONAL ASSOCIATION OF BRIDGE, STRUCTURAL, ORNAMENTAL AND REINFORCING IRON WORKERS

Members of the Iron Workers assemble and erect steel framework and other metal parts in buildings and on bridges, dams, skyscrapers, factories and other steel structures. They raise, place and join steel girders and columns to form structural frameworks. In addition, iron workers are responsible for metal decking and the steel reinforcing of concrete construction. Iron workers weld, fabricate and install ornamental, architectural and miscellaneous metal building components.

ironworkers.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications can be completed, in person only, at:

Ironworkers Local Union #33

154 Humboldt Street, Rochester, NY 14610

Applications are available from 7:30 a.m. to 3:30 p.m., the first Tuesday of each month.

Applications must be completed on the premises.

The Committee requires that applicants:

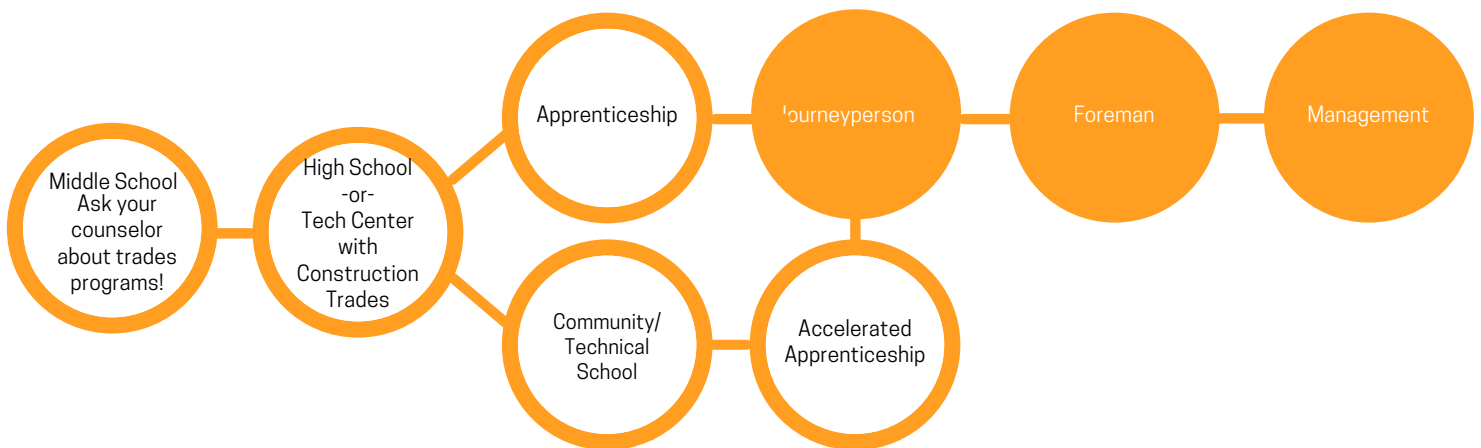
- Be at least 18 years old.
- Have a high school or equivalency diploma.
- Transcript required if accepted for the program.
- Have a New York State drivers license -- apprentices will be required to drive company vehicles on public streets.
- Have reliable transportation to and from job sites and related instruction.
- Sign an affidavit stating they are physically able to do the work of an ironworker, which includes working at heights, on or off ladders, with materials or tools.
- Be willing and able to attend our apprenticeship training program Monday and Wednesday nights from 5-8pm

LABORER

CAREER - ABOUT

Construction laborers can be found on almost all construction sites performing a wide range of tasks from the very easy to the potentially hazardous. They can be found at building, highway, and heavy construction sites; residential and commercial sites; tunnel and shaft excavations; and demolition sites. Many of the jobs they perform require physical strength, training, and experience. While most construction laborers specialize in a type of construction, such as highway or tunnel construction, some are generalists who perform many different tasks during all stages of construction. Construction laborers, who work in underground construction, such as in tunnels, or in demolition are more likely to specialize in only those areas.

CAREER - PATHWAYS



HIGH SCHOOL

Many school districts offer specialty courses or programs geared toward general construction trades. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES

ALFRED STATE COLLEGE

Building Trades: Building Construction (A.O.S)

alfredstate.edu/building-trades

MONROE COMMUNITY COLLEGE

Construction Essentials Certificate

workforceforward.com/professional-development/skilled-trades-courses/construction-essentials-sections/

LABORER

LOCAL UNION

LABORERS LOCAL #435

(585) 546-8460

local435.com



INTERNATIONAL UNION

LABORERS' INTERNATIONAL UNION OF NORTH AMERICA

LIUNA represents members working in construction and environmental remediation. Laborers' work includes excavation, footing and foundations, carpenter tending, compaction, concrete placement, power and hand tools, general clean-up and mason tending for bricklayers. Environmental laborers do asbestos removal, hazardous waste and radiation clean-up. The work performed by Laborers is very physical and it includes digging, carrying, pulling and bending —usually outside in all kinds of weather for long hours at a time.

liuna.org



APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 2 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase every six months during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications can be completed, in person only, at:

Local Union #435

20-22 Fourth St., Rochester, NY 14609

Applications are available from 9:00am to 3:00pm, Monday through Friday, excluding legal holidays, during the recruitment period. No applications are to leave the premises.

The Committee requires that applicants:

- At least 18 years of age
- Must have a high school diploma or GED
- Must attest they are physically able to do the work of a skilled laborer, which may include:
 - Consistently lifting, up to 50 lbs.
 - Working outdoors and in a variety of weather conditions.
 - Working in an environment with strong odors and loud noises.
- Must pass a Non-DOT drug test at the expense of the sponsor, prior to enrollment.
- Must be able to work legally in the United States.
- Valid NY state drivers license
- Must have reliable transportation

MECHANICAL ENGINEER

CAREER - ABOUT

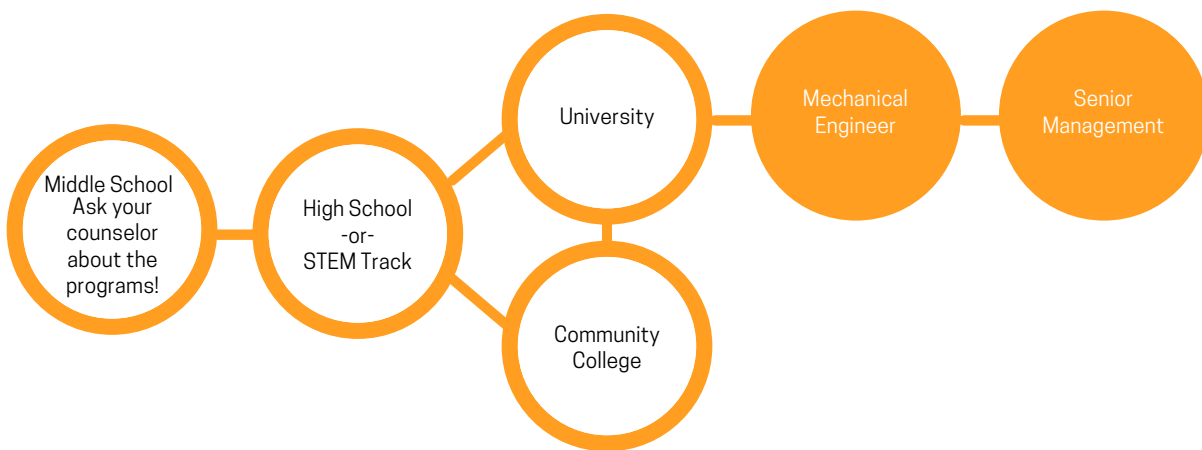
Mechanical engineers research, design, develop, build, and test mechanical and thermal sensors and devices, including tools, engines, and machines. Mechanical engineering is one of the broadest engineering fields. Mechanical engineers design and oversee the manufacture of many products ranging from medical devices to new batteries.

Mechanical engineers design power-producing machines, such as electric generators, internal combustion engines, and steam and gas turbines, as well as power-using machines, such as refrigeration and air-conditioning systems. Mechanical engineers design other machines inside buildings, such as elevators and escalators. They also design material-handling systems, such as conveyor systems and automated transfer stations.

Heating and cooling systems engineers work to create and maintain environmental systems wherever temperatures and humidity must be kept within certain limits. They develop such systems for airplanes, trains, cars, schools, and even computer rooms.

CAREER - PATHWAYS

Mechanical engineers are required to obtain a minimum of a bachelors degree. Professional engineering licensing is available for mechanical engineers who have completed a bachelors or masters degree program. Employers may or may not require licensure.



MECHANICAL ENGINEER

HIGH SCHOOL

Students interested in pursuing a career in mechanical engineering should pursue STEM courses. Algebra and other advanced math courses can also be completed during college coursework.

Suggested Specialty Courses:

Calculus and Physics

Many school districts offer specialty courses or programs geared toward STEM. Contact your counselor to find out how you can participate in your school's programs.

CONTACTS

AMERICAN COUNCIL OF ENGINEERING (ACEC) NEW YORK

ACECNY@ACECNY.ORG

acecny.org/page/rochester



MECHANICAL ENGINEER

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE

Mechanical Engineering Technician (A.O.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪
(607) 587-4692

catalog.alfredstate.edu/current/programs/mechanical-engineering-technology

CORNING COMMUNITY COLLEGE

Mechanical Technology: CAD Design (A.A.S.)

1 Academic Drive ▪ Corning, NY 14830 ▪
(607) 962-9220

corning-cc.edu/academics/mechanical-technology/

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Mechanical Engineering Technology (A.A.S.)

Voorhees Hall 433 (V-520) ▪ 186 Jay Street ▪
Brooklyn, NY 11201 ▪ (718) 260-5233

citytech.cuny.edu/mechanical/mechanical-technology-aas.aspx

ERIE COMMUNITY COLLEGE

Mechanical Engineering Technology (A.A.S.)

North Campus ▪ 6205 Main Street ▪
Williamsville, NY 14221 ▪ (716) 270-5290

ecc.edu/academics/mechanical-engineering-technology.html

HUDSON VALLEY COMMUNITY COLLEGE

Mechanical Engineering Technology (A.A.S.)

Cogan Hall, Room 145 ▪ 80 Vandenburg
Avenue ▪ Troy, NY 12180
(518) 629-8003

hvcc.edu/programs/all/stem/mechanical-engineering-technology-aas.html

JAMESTOWN COMMUNITY COLLEGE

Mechanical Technology - Design (A.A.S.)

525 Falconer Street ▪ Jamestown, NY 14702 ▪
(800) 388-1324

sunyjcc.edu/programs/mechanical-technology-design-aas

MOHAWK VALLEY COMMUNITY COLLEGE

Mechanical Engineering Technologies (A.A.S.)

1101 Sherman Drive ▪ Utica, NY 13501 ▪
(315) 792-5354

mvcc.edu/academics/stem/mechanical-engineering-technology/index.php

MONROE COMMUNITY COLLEGE

Mechanical Technology (A.A.S.)

Brighton Campus ▪ 1000 East Henrietta Road ▪
Rochester, NY 14623

(585) 292-2200

monroecc.edu/academics/majors-programs/stem/mechanical-technology-associate-of-applied-science

SUNY BROOME

Mechanical Engineering Technology (A.A.S.)

Mechanical Building 117 ▪ P.O. Box 1017 ▪
Binghamton, NY 13902

(607) 778-5010

sunybroome.edu/programs/met

SUNY CANTON

Mechanical Engineering Technology (A.A.S.)

34 Cornell Drive ▪ Canton, NY 13617 ▪
(315) 386-7217

canton.edu/csoet/mechanical

SUNY WESTCHESTER COMMUNITY COLLEGE

Mechanical Technology (A.A.S.)

75 Grasslands Road ▪ Valhalla, NY 10595 ▪
(914) 606-6942

sunywcc.edu/academics/programs/mechanical-technology-aas

MECHANICAL ENGINEER

COLLEGES: 4-YEAR PROGRAMS

ALFRED STATE COLLEGE

Mechanical Engineering Technology (B.S.)

Upper College Drive ▪ Alfred, NY 14802 ▪
(607) 587-4692

catalog.alfredstate.edu/current/programs/mechanical-engineering-technology

CLARKSON UNIVERSITY

Mechanical Engineering (B.S.)

8 Clarkson Avenue ▪ Potsdam, NY 13699 ▪
(315) 268-6480

clarkson.edu/undergraduate/mechanical-engineering

COLUMBIA UNIVERSITY

Mechanical Engineering (B.S.)

500 West 120th Street, Mudd 220 ▪ New York, NY 10027 ▪ (212) 854-2966

me.columbia.edu/academics/undergraduate-program-2

CORNELL UNIVERSITY

Mechanical Engineering (B.S.)

105 Upson Hall ▪ Ithaca, NY 14853 ▪
(607) 255-1805

mae.cornell.edu/mae/programs/undergraduate-programs/mechanical-engineering-major

CUNY NEW YORK CITY COLLEGE OF TECHNOLOGY

Mechanical Engineering Technology (B.Tech.)

Voorhees Hall 520 (V-520) ▪ 186 Jay Street ▪
Brooklyn, NY 11201 ▪ (718) 260-5233

citytech.cuny.edu/mechanical/mechanical-technology-btech.aspx

NEW YORK UNIVERSITY

Mechanical Engineering (B.S.)

6 MetroTech Center ▪ Brooklyn, NY 11201 ▪
(646) 997-3600

engineering.nyu.edu/academics/programs/mechanical-engineering-bs

ROCHESTER INSTITUTE OF TECHNOLOGY

Mechanical Engineering Technology (B.S.)

One Lomb Memorial Drive ▪ Rochester, NY 14623 ▪ (585) 475-7712

rit.edu/study/mechanical-engineering-technology-bs

SUNY BUFFALO

Mechanical Engineering (B.S.)

240 Bell Hall ▪ North Campus ▪ Buffalo, NY 14260 ▪ (716) 645-2593

catalog.buffalo.edu/academicprograms/mechanical_engineering_bs.html

SUNY CANTON

Mechanical Engineering Technology (B.Tech.)

34 Cornell Drive ▪ Canton, NY 13617 ▪
(315) 386-7217

canton.edu/csoet/mech

SUNY POLYTECHNIC INSTITUTE

Mechanical Engineering (B.S.)

100 Seymour Rd ▪ Utica, NY 13502 ▪
(315) 792-7500

sunypoly.edu/academics/majors-and-programs/mechanical-engineering.html

UNITED STATES MILITARY ACADEMY WEST POINT

Mechanical Engineering (B.S.)

606 Thayer Road ▪ West Point, NY 10996 ▪
(845) 938-4041

westpoint.edu/academics/academic-departments/civil-and-mechanical-engineering/mechanical-engineering

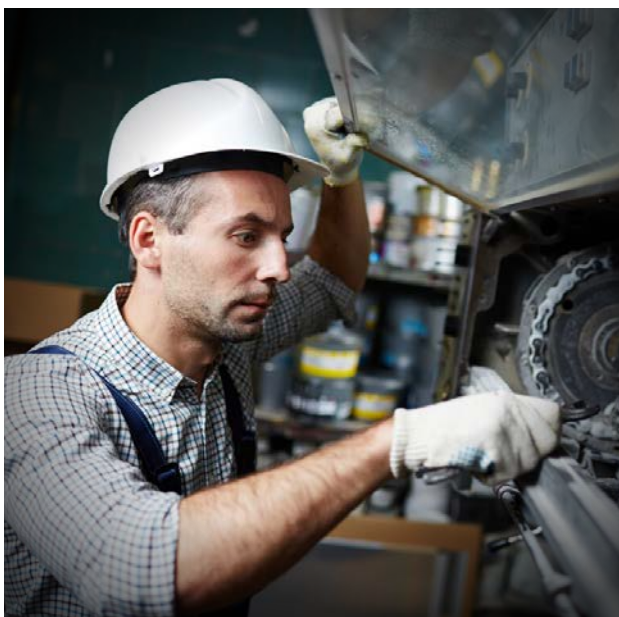
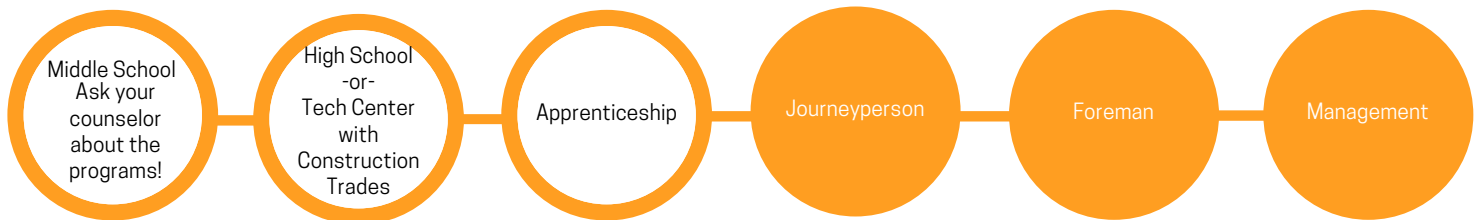
MILLWRIGHT

CAREER - ABOUT

Millwrights install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings. Millwrights are skilled in the erection, installation, and maintenance of production and plant machinery. Millwright work includes tasks of rigging, precision leveling and alignment, building bases, erecting machinery and welding.

Workers in this occupation must follow safety precautions and use protective equipment, such as hardhats, safety glasses, and hearing protectors. Most work full time in manufacturing facilities. However, they may be on call and work night or weekend shifts. Overtime is common.

CAREER - PATHWAYS



HIGH SCHOOL

While there are no specialty programs for millwrights available at local high schools, anyone interested in becoming a millwright would benefit from any manufacturing or general construction trades programs. Contact your counselor to find out how you can participate in your school's programs.

MILLWRIGHT

LOCAL UNION

MILLWRIGHTS LOCAL #1163

21 Goodway Drive, Rochester, NY 14623

local1163.com



INTERNATIONAL UNION

EASTERN MILLWRIGHT REGIONAL COUNCIL

Eastern Millwright Regional Council professionals are expertly trained and engaged with the construction, installation and maintenance of complex machinery, containing moving, interconnected parts. The millwrights are precision craftsmen who install, upgrade, maintain, diagnose, and repair industries' most complex and intricate machinery to ensure they operate in perfect working order.

easternmillwrights.com

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications may be completed online:

easternmillwrights.com/Module/Application/Application/default

The Committee requires that applicants:

- Must be at least 18 years old. A signed statement must be submitted at the time of application. Proof will be required at the time of employment.
- Must have a high school diploma or a high school equivalency diploma (such as TASC or GED). A signed statement must be submitted at the time of application. Proof will be required at the time of employment.
- Must pass a drug test, at the expense of the sponsor, after selection and prior to indenture.
- Must take a math and measuring test. Score will be part of the evaluation.
- Must sign a statement indicating that they are physically able to perform the work of the trade, which may include:
 - Working from heights.
 - Working in confined spaces and underground.
 - Working in all types of weather conditions and in all types of indoor conditions including heat and cold.
 - Lifting a minimum of 50 pounds.
- Must have reliable transportation to and from various jobsites and related instruction classes. A signed statement attesting to this must be submitted at the time of application.
- Must live within the geographical jurisdiction of the Eastern Millwright Regional Council, which includes every county in New York State excluding New York City.
- Must provide military transfer card or discharge form DD-214, if applicable, after selection and prior to indenture.
- Must participate in an interview, if selected.

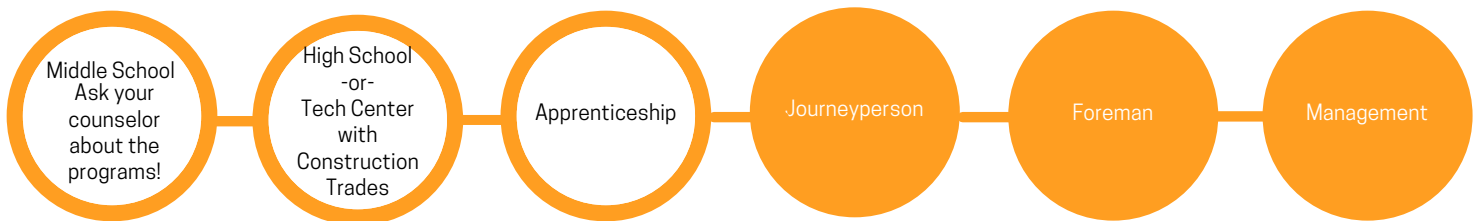
OPERATING ENGINEER & EQUIPMENT OPERATORS

CAREER - ABOUT

Operating Engineers and equipment operators operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, cranes, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties.

Construction equipment operators work in nearly all weather conditions. Workers often get dirty, greasy, muddy, or dusty. The vast majority of operators work full time and some operators have irregular hours. Some construction projects, especially road building, are done at night.

CAREER - PATHWAYS



HIGH SCHOOL

While there are no specialty programs for operating engineers available at local high schools, anyone interested in becoming an operating engineer would benefit from any general construction trades programs. Contact your counselor to find out how you can participate in your school's programs.



OPERATING ENGINEER & EQUIPMENT OPERATOR



LOCAL UNION

INTERNATIONAL UNION OF OPERATING ENGINEERS, LOCAL #158

iuoe158training.org

INTERNATIONAL UNION

INTERNATIONAL UNION OF OPERATING ENGINEERS

IUOE members are operating and stationary engineers. Stationary engineers work in operations and maintenance in building and industrial complexes, and in the service industries. Operating engineers operate heavy construction equipment such as cranes, bulldozers, pavers, trench excavators and many other kinds of equipment used in the construction of buildings, dams, airports and highways. Stationary Engineers primarily work indoors, Operating Engineers primarily work outdoors.

iuoe.org



APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 4 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications must be completed on-site in person at:

Training and Apprenticeship office, 44 Hannay Lane, Glenmont, NY

between the hours of 8:00 a.m. - 11:00 a.m. or 12:30 p.m. - 3:30 p.m. on application day. APPLICATIONS MUST BE COMPLETED ON THE PREMISES. APPLICATIONS CAN NOT BE MAILED OR TAKEN OFF PREMISES.

The Committee requires that applicants:

- at least 18 years old
- high school graduate with passing grades in Math and English
- able to take a general aptitude test
- able to read and understand English and understand verbal instructions and warnings given in English
- Live within the District 106 geographical jurisdiction for at least 6 months prior to this recruitment.
- be willing and able to travel to and from various job sites within the Local's jurisdiction.
- Able to attend all related classroom training
- Pass a drug and alcohol test at the sponsor's expense, after acceptance into the program
- be physically able to perform the work of the craft, which may include lifting and climbing.

PLUMBER, PIPEFITTER & STEAMFITTER

CAREER - ABOUT

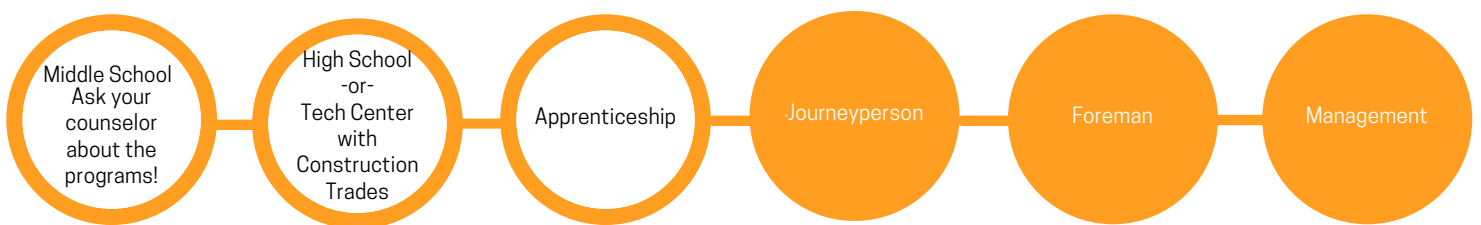
Most people are familiar with plumbers who come to their home to unclog a drain or install an appliance. In addition to these activities, plumbers, pipefitters, and steamfitters install, maintain, and repair many different types of pipe systems, including municipal water treatment plants to residential, commercial, and public buildings. Known as the Mechanical Trades, 'Fitters' also perform the installation, service and repair to all forms of HVAC/R systems.

STEAMFITTER-PIPEFITTERS; Their work is diverse and in fields such as oil refineries, paper mills, nuclear power plants, manufacturing plants, and in the automotive industry. Steamfitter-pipefitters often work on high pressure and high-temperature systems, requiring a thorough knowledge of scientific principles to complete the work safely.

SPRINKLER FITTERS; Install life and property saving fire protection systems in homes, schools, hospitals, office buildings, hotels, and more.

HVACR SERVICE TECHNICIANS; Install, maintain and repair plumbing, heating, ventilating, air conditioning and refrigeration systems in the residential, commercial and industrial sectors.

CAREER - PATHWAYS



HIGH SCHOOL

Students interested in a career as a Plumber, Pipefitter & Steamfitter would benefit from both HVAC/Welding programs as well as general construction trades programs available in most school districts. For some areas of the work, advanced scientific knowledge is needed and students would benefit from continued math and science classes. Contact your counselor to find out how you can participate in your school's programs.

PLUMBER, PIPEFITTER & STEAMFITTER



LOCAL UNION

PLUMBING & HEATING JOINT APPRENTICESHIP & TRAINING COUNCIL

ualocal13.org

INTERNATIONAL UNION

UNITED ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF THE PLUMBING AND PIPE FITTING INDUSTRY OF THE UNITED STATES AND CANADA

UA is a multi-craft union that represents plumbers and pipe, sprinkler, and refrigeration fitters, as well as HVAC service technicians. These jobs require the installation, remodeling or maintenance of systems that carry water, steam and other liquids or gases necessary for sanitation, industrial production, heating and air conditioning, and many other uses. Workers measure, cut, and bend pipe, as well as weld, braze, caulk, solder, glue or thread joints at residential and commercial job sites.

ua.org

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE

Heating, Ventilation, and Air Conditioning (A.O.S.)

10 Upper College Dr., Alfred, NY 14802

alfredstate.edu/heating-ventilation-air-conditioning

MONROE COMMUNITY COLLEGE

Air Conditioning Technology: Heating and Ventilation (A.A.S.)

(585) 292-3700

monroecc.edu/depts/hvac



PLUMBER, PIPEFITTER & STEAMFITTER

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 5 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications must be completed on-site in person at:

Local Union #13

1850 Mt. Read Blvd., Rochester, NY 14615

Applications are received every 1st Tuesday each month from 9:00 a.m. to 11:00 a.m. & 1:00 p.m. to 3:00 p.m. at the Union Hall. Calculators are not allowed.

ALL TESTS MUST BE TURNED IN AT 11:00AM (morning session) OR 3:00PM (afternoon session). NO EXCEPTIONS!! GIVE YOURSELF ENOUGH TIME TO FINISH, SO YOU DON'T HAVE TO RUSH!



The Committee requires that applicants:

- Must be at least 18 years old at the time of application.
- Must pass a physical exam and drug test, at the expense of the sponsor, after selection and prior to indenture.
- Must have a high school diploma with a final grade of "C" or better in algebra and geometry, or a high school equivalency diploma (such as GED or TASC) with a minimum math score of 55. Proof must be presented at time of application.
- Must pass a math exam, at the time of application, with a score of 70% or higher.
- Must attest that they are physically able to do the work of a plumber or steamfitter, which includes:
 - Heavy lifting (in excess of 80 lbs. on occasion).
 - Working in confined spaces.
 - Climbing and working at various heights from ladders, lifts, and scaffolds.
 - Working indoors and outdoors, in industrial plants, institutions, commercial buildings, and power plants.
- Must be legally able to work in the United States.
- Must be a resident, of at least one year, within the jurisdiction of Local Union #13.
- Must appear for an interview when scheduled.
- Must have a valid driver's license. Apprentices may be required to drive company vehicles.
- Must have reliable transportation to and from various job sites and related instruction classes.
- Must submit to random drug testing at any time during the school year.

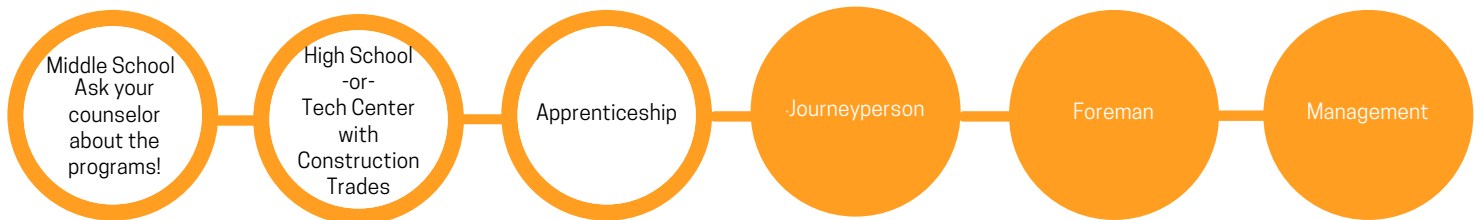
ROOFER

CAREER - ABOUT

Roofers install roofs on structures with shingles, slate, asphalt, aluminum, wood, or related materials. They also spray roofs, sidings, and walls with material to bind, seal, insulate, or soundproof sections of structures.

Roofing and waterproofing work can be physically demanding. It involves heavy lifting, as well as climbing, bending and kneeling, frequently in very hot weather. Overtime may be required to finish a job, especially during busier summer months.

CAREER - PATHWAYS



HIGH SCHOOL

While there are no specialty programs for roofers available at local high schools, anyone interested in becoming a roofer would benefit from any general construction trades programs. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES

ALFRED STATE COLLEGE

Building Trades: Building Construction (A.O.S)

alfredstate.edu/building-trades

MONROE COMMUNITY COLLEGE

Construction Essentials Certificate

workforceforward.com/professional-development/skilled-trades-courses/construction-essentials-sections/



ROOFER

LOCAL UNION

UNITED UNION OF ROOFERS, WATERPROOFERS AND ALLIED WORKERS LOCAL #22

280 Metro Park, Rochester, NY 14623

(585) 235-3098

rooferslocal22.com



INTERNATIONAL UNION

UNITED UNION OF ROOFERS, WATERPROOFERS AND ALLIED WORKERS

Members of the Roofers union install new roofs and remove old roofs using a variety of materials. Roofers install hot built-up and single-ply roofing systems on mostly commercial/ industrial structures. Waterproofers install moisture-resistant products on below-grade structures and other surfaces to prevent water intrusion into buildings. The work is performed in all weather conditions. Members also operate a variety of mechanical and electrical equipment associated with the installation of roofing and waterproofing products.

unionroofers.com

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 3 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications must be completed on-site in person at:

280 Metro Park, Rochester, NY 14623
Applications are accepted only on Monday-Friday at the JATC office between the hours of 9:00-3:00 PM, (excluding Federal Holidays) or by appointment by emailing us at JATC@RoofersLocal22.com

The Committee requires that applicants:

- Must be at least 18 years old.
- Must have a minimum of a 10th grade education with a passing grade in basic math. Proof is required at the time of application.
- Must have reliable transportation to and from work sites and related instruction.
- Must be legally authorized to work in the U.S.

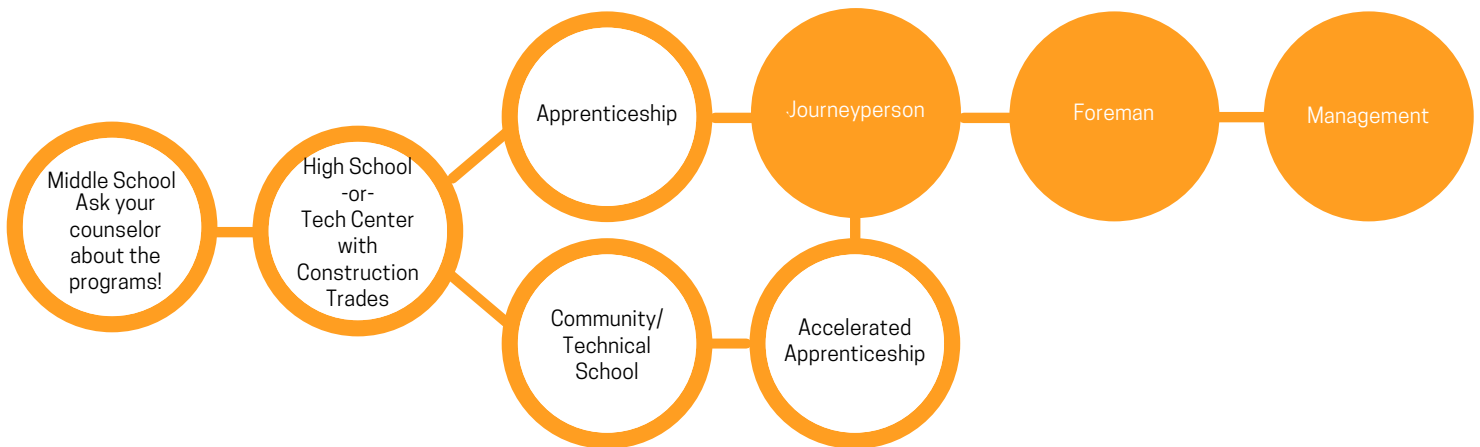
- Must attest in writing that they are physically capable of performing the work of the trade, which may include:
 - Repetitive heavy lifting, kneeling, squatting, and walking.
 - Climbing and working off ladders and scaffolds.
 - Working from high heights which may require wearing safety protective equipment.
 - Working in extreme temperatures and severe weather conditions.
 - Working with respirators.
- Must sign a statement indicating that they are residents within the jurisdiction of Local Union #22 for one year or more. This includes the counties of Livingston, Monroe, Ontario, Wayne, and Yates.
- May be required to pass a drug screening, at the expense of the sponsor, after selection and prior to indenture.
- Must provide DD-214, Certificate of Release or Discharge from Active Duty, if applicable, after selection and prior to indenture.

SHEET METAL WORKERS

CAREER - ABOUT

Also known as “Tin-Knockers” they work in either construction-related work or shop production of sheet metal products in manufacturing. Sheet Metal Workers make, install, and maintain heating, ventilation, and air-conditioning (HVAC) duct systems: roofs, siding, rain gutters, downspouts, skylights, restaurant equipment, outdoor signs, railroad cars, tailgates, customized precision equipment, and many other products made from metal sheets. They also work with fiberglass and plastic materials. Although some workers specialize in fabrication, installation, or maintenance, most do all three aspects of the trade. Sheet Metal Workers may also be welding fabricators, Test & Balance or HVAC service technicians.

CAREER - PATHWAYS



HIGH SCHOOL

While there are no specialty programs for roofers available at local high schools, anyone interested in becoming a roofer would benefit from any general construction trades programs. Contact your counselor to find out how you can participate in your school's programs.

INTERNATIONAL UNION

INTERNATIONAL ASSOCIATION OF SHEET METAL, AIR, RAIL AND TRANSPORTATION WORKERS

Sheet Metal Workers fabricate, install and service heating, venting, and air conditioning (HVAC) systems; blowpipe and industrial systems; metal roofing; coping and flashing; all forms of stainless steel work for restaurants, kitchens and hospitals. They fabricate and weld all forms of metal products, prepare shop and field drawings manually and with computer programs. SMART Members also perform HVAC and refrigeration service, Testing Adjusting and Balancing (TAB) of mechanical systems.

smart-union.org

SHEET METAL WORKERS

LOCAL UNION

SHEET METAL, AIR, RAIL & TRANSPORTATION WORKERS LOCAL #46

244 Paul Road, Rochester NY 14624
smw46.com/training



COLLEGES

ALFRED STATE COLLEGE

Building Trades: Building Construction (A.O.S)

alfredstate.edu/building-trades

MONROE COMMUNITY COLLEGE

Construction Essentials Certificate

workforceforward.com/professional-development/skilled-trades-courses/construction-essentials-sections/



APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 5 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Application forms are available online

The Sheet Metal JATC of Rochester of Local #46, Rochester, New York, is continuously accepting apprenticeship applications.

smw46.com/join/apprenticeship

The Committee requires that applicants:

- Must be at least 18 years old.
- Must have a high school diploma or a high school equivalency diploma (such as TASC or GED), with one year of algebra with a passing grade in Math Course I or Math Course II; or a minimum of 55 on the TASC or GED math test. .

- Must sign an affidavit attesting they are physically able to perform the work of the trade. Work in the Sheet Metal Industry may be physical and strenuous. It includes:
 - Climbing ladders, scaffolds and roofs.
 - Working at great heights.
 - Lifting materials in excess of 70 lbs.
 - Working outdoors in all types of weather conditions.
- Must take and pass a drug test upon offer of employment. May be subject to additional drug testing at any time during the apprenticeship program. Drug testing is paid for by the sponsor.
- Must have a valid NYS driver's license in order to operate company vehicles.
- Must have reliable transportation to and from various job sites and required classes at the approved school.
- Must be a resident, for at least one year, within the jurisdiction of Sheet Metal Workers of Rochester, Local Union #46, which includes the counties of Livingston, Monroe, Ontario, Seneca, Wayne, and Yates.

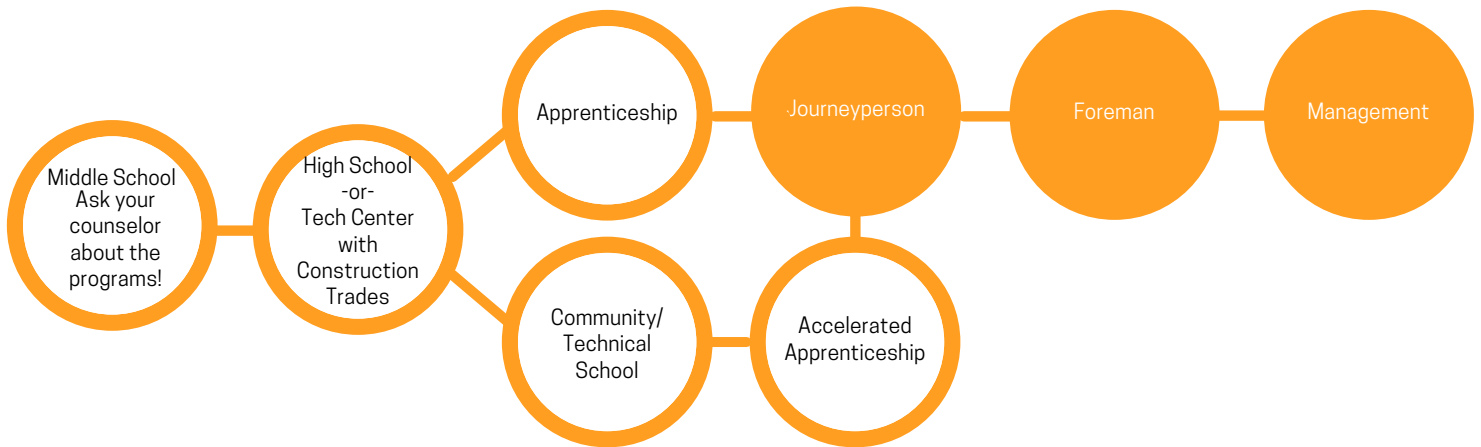
SPRINKLER FITTER

CAREER - ABOUT

Sprinkler Fitters work on installation, repair, and maintenance of fire sprinkler systems as part of a fire protection system. They work in a variety of buildings such as multi-family residential units, commercial buildings, hospitals, schools, power plants, and factories.



CAREER - PATHWAYS



HIGH SCHOOL

While there are no specialty programs for roofers available at local high schools, anyone interested in becoming a roofer would benefit from any general construction trades programs. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE

Heating, Ventilation, and Air Conditioning (A.O.S.)

10 Upper College Dr., Alfred, NY 14802

alfredstate.edu/heating-ventilation-air-conditioning

MONROE COMMUNITY COLLEGE

Air Conditioning Technology: Heating and Ventilation (A.A.S.)

(585) 292-3700

monroecc.edu/depts/hvac

SPRINKLER FITTER

LOCAL UNION

ROAD SPRINKLER FITTERS LOCAL 669

Joint Apprenticeship Training Program, (410) 312-5202

sprinklerfitters669.org/jatc.aspx



INTERNATIONAL UNION

UNITED ASSOCIATION OF JOURNEYMEN AND APPRENTICES OF THE PLUMBING AND PIPE FITTING INDUSTRY OF THE UNITED STATES, CANADA

The United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States, Canada (UA), affiliated with the national building trades, represents approximately 355,000 plumbers, pipefitters, sprinkler fitters, service technicians and welders in local unions across North America. We also honor a federation agreement with both the Australian Plumbing Trades Employees Union (PTEU) and Irish Technical, Engineering Electrical Union (TEEU).

ua.org

APPRENTICESHIP APPLICATION REQUIREMENTS

Apprenticeship Program Length: 5 Year Program

Cost: Paid in Full by Employer

Earn While you learn: Wages and Benefits increase yearly during length of apprenticeship

Benefits Include: Full Family Healthcare, Pension Plan, Retirement Plan & more

Applications can be obtained online:

The UA Sprinkler Fitters Local 669 Joint Apprenticeship and Training Committee (J.A.T.C.) program are always looking for capable individuals to join our trade.

training669.org



The Committee requires that applicants:

- Must be at least 18 years old
- Must have a High School Diploma or G.E.D.
- Must be physically fit to do the work of the trade
- Must have other than dishonorable discharge from military (if applicable)
- Must be able to pass appropriate drug test and medical exam (paid for by sponsor)

SURVEYOR & MAPPING TECHNICIAN

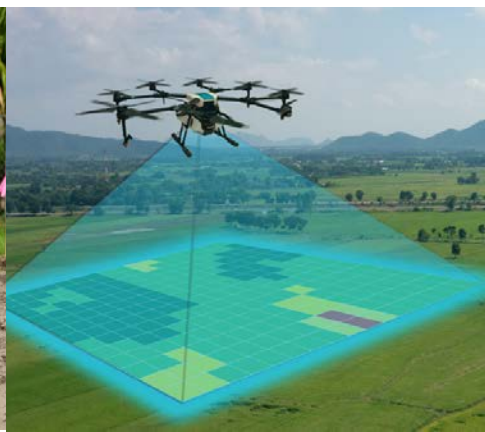
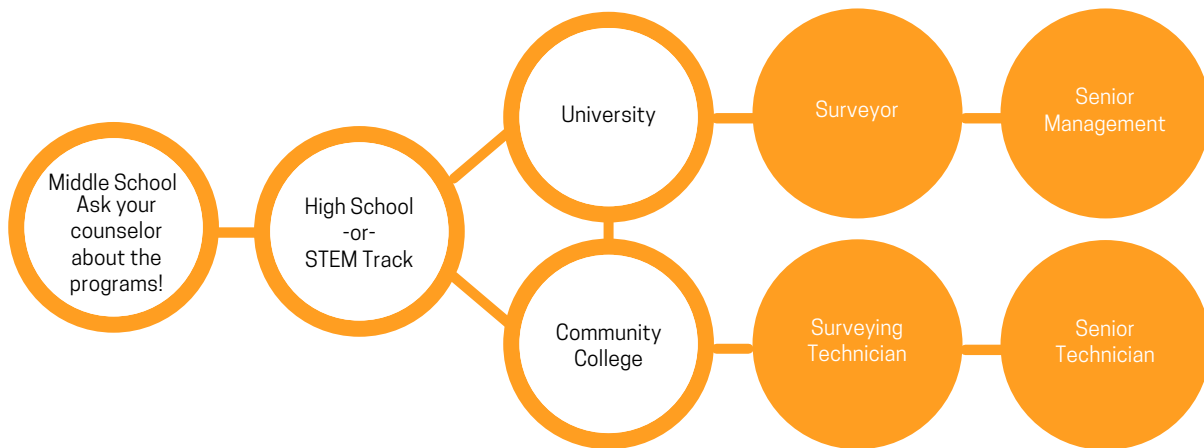
CAREER - ABOUT

Surveyors make exact measurements and determine property boundaries. Provide data relevant to the shape, contour, gravitation, location, elevation, or dimension of land or land features on or near the earth's surface for engineering, mapmaking, mining, land evaluation, construction, and other purposes.

Surveying and Mapping Technicians perform surveying and mapping duties, usually under the direction of a surveyor, cartographer, or photogrammetrist to obtain data used for construction, mapmaking, boundary location, mining, or other purposes. May calculate mapmaking information and create maps from source data, such as surveying notes, aerial photography, satellite data, or other maps to show topographical features, political boundaries, and other features. May verify accuracy and completeness of topographical maps.

CAREER - PATHWAYS

The practice of surveying in NY requires licensure. To qualify for a license, students can obtain either an associates or bachelors degree. See the section on the next page for local qualifying programs. In some cases, similar engineering programs can be used to satisfy the requirements.



SURVEYOR & MAPPING TECHNICIAN

HIGH SCHOOL

Students interested in pursuing a career in civil engineering should pursue STEM courses. Many school districts offer specialty courses or programs geared toward STEM. Contact your counselor to find out how you can participate in your school's programs.

COLLEGES: 2-YEAR PROGRAMS

ALFRED STATE COLLEGE
Surveying Engineering Technology (A.A.S.)
(607) 587-4681
catalog.alfredstate.edu/current/programs/surveying-engineering-technology/

MONROE COMMUNITY COLLEGE
Construction Technology (A.A.S.)
(585) 292-2200
monroecc.edu/academics/majors-programs/stem/construction-technology-associate-degree

**SUNY COLLEGE OF ENVIRONMENTAL
SCIENCE AND FORESTRY**
Land Surveying Technology (A.A.S.)
1 Forestry Drive, Syracuse, NY 13210
esf.edu/rangerschool/programs/lst.asp

COLLEGES: 4-YEAR PROGRAMS

ALFRED STATE COLLEGE
***Surveying and Geomatics Engineering
Technology (B.S.)***
(607) 587-4681
catalog.alfredstate.edu/current/programs/surveying-and-geomatics-engineering-technology



The logo for UNiCON, with 'UNiCON' in a bold, dark red font. The 'i' is lowercase and italicized, while the other letters are uppercase. A horizontal line is positioned below the text.

UNiCON

Unions and Businesses
United in Construction

2022



PRE-APPRENTICESHIP AND COMMUNITY PROGRAMS

Electronic Resources, Printables, and Guides: uniconroc.com/resources

180 Linden Oaks, Suite 150, Rochester, NY 14625 | (585) 288-3440 | info@uniconrochester.com | uniconroc.com

ACE MENTOR

ACE - ARCHITECTURE CONSTRUCTION ENGINEERING

High school students in the Rochester and surrounding area can now benefit from a nationwide program designed to introduce them to the wide range of career opportunities open to young people in architecture, construction, engineering, and related areas of the building design and construction industry.

At weekly meetings, student teams work directly with professionals from leading area firms, who volunteer their time to mentor the teams as they design hypothetical projects, tour local construction sites, and visit architectural, engineering and construction offices.

For students, it's a unique chance to discover and develop new skills, solidify future goals and get on track to exciting, rewarding careers. In addition, many students form positive relationships with industry professionals who can provide important references for obtaining college admissions, scholarships, internships and full-time employment.

OUR TEAM PROJECTS

Students in the ACE program typically work closely with their mentors on projects that provide hands-on experience in solving the types of design, engineering and construction challenges industry professionals confront every day.

The teams often learn how to use advanced computerized tools, such as Revit, while special exercises and activities illustrate the industry's demand for young people skilled in math, physics, economics, art and other disciplines.

Many ACE affiliates culminate their program year with special events at which teams present their concepts to mentors, families, teachers and community leaders.

PARTICIPATE IN ACE!

If you'd like to experience ACE's challenges, opportunities and rewards for yourself, just contact the ACE leader listed below.

GET STARTED:

For more information visit their website:

acementor.org/affiliates/new-york/rochester/about-us/

Or Email: RochesterNY@acementor.org



ACE MENTOR PROGRAM
ARCHITECTURE • CONSTRUCTION • ENGINEERING

HELMETS TO HARDHATS

H2HNY

New York Helmets to Hardhats helps veterans pursue a career in a union construction trade of their choice. New York Helmets to Hardhats is affiliated with the New York State Building Trades Unions. Veterans don't need any experience, they will be placed in an apprenticeship program which will provide them with all the training they need to succeed.

OUR STORY

The Helmets to Hardhats Program was conceptualized in 2002 and rolled out nationally in 2003 to assist Post 9/11 Veterans transition into careers in the Building Trades. New York, with its rich union density and high Veteran population, was one of the original launch sites for the program. To date, over 3,000 Veterans in New York State have started construction careers. NY Helmets to Hardhats has a team of dedicated professionals dedicated to your transition.

WHO CAN PARTICIPATE IN HELMETS TO HARDHATS?

Veterans that have received an Honorable Discharge from U.S. military service.



GET STARTED:

For more information visit their website:
nyh2h.org



JOB CORPS IROQUOIS JOB CORPS CENTER

CONSTRUCTION TRAINING FOR DISADVANTAGED YOUTH

Job corps is a federally-funded comprehensive program that provides essential academic and career skills training and prepares students for success in every aspect of their lives. Students receive hands-on experience through our work-based learning program, internships, and job shadowing opportunities. While training, you will receive basic living benefits.

Who can participate in Job Corps?

16 to 24-year-olds ready to work toward a successful future are welcome. The maximum age limit may be waived if the applicant is a person with a documented disability. For minors, a parent or guardian must sign a consent form. Applicants must meet one or more of these conditions: receives public assistance, earns poverty-level income, is homeless, is a foster child, or qualifies for free or reduced-price lunch. Your admissions representative will help you determine your eligibility.

AT JOB CORPS, YOU RECEIVE BASIC LIVING BENEFITS TO MAKE YOUR LIFE EASIER:

- Housing: a furnished dorm
- Books and supplies
- Childcare allotment
- Clothing: for career training
- Food: nutritious meals
- Health & wellness: basic medical care
- Money: a living allowance

With the help of center staff and employers, you will:

- Learn industry-related technical and academic skills
- Demonstrate interpersonal communication and problem-solving skills
- Practice social and personal management skills

You will then:

- Begin the job search process
- Prepare for independent living

GET STARTED:

For more information visit their website: iroquois.jobcorps.gov
Or call Job Corps today! (800) 733-JOBS



M.A.P.P.

MULTI-CRAFT APPRENTICESHIP PREPARATION PROGRAM

The Multi-Craft Apprenticeship Preparation Program is a New York State not-for-profit organization. We are a Direct-Entry gateway into a career-track opportunity in the Construction industry. M.A.P.P., Inc. is a partner of the Rochester Building and Construction Trades Council and serve as one of its more visibly active Apprenticeship Readiness Program resources. We provide training in the real-world job-site experience, education and basic skills required to successfully become viable construction apprentices, to historically under-served populations -- particularly African American men and women, in the Rochester, NY area.

Our work contributes to the effort of meeting construction company hiring and contracting goals. M.A.P.P., Inc. addresses the local, long-standing and highly visible issues of the inequities in employment opportunities, in the construction industry, and works to afford participants a real and tangible career-track opportunity.

M.A.P.P., Inc. works to address the critical need for greater diversity amongst the construction industry workforce. Importantly, our Apprenticeship Readiness Program has effectively demonstrated to local, regional and statewide officials that the Rochester Building and Construction Trades Council is committed to diversifying the construction labor union workforce and to providing pathways to middle class, career-track opportunities to historically underserved and thereby underrepresented workers.

PROJECT PHOENIX

Project Phoenix is the "sister program" of the M.A.P.P. The directors created and implemented this 'On-The-Job' training component to identify participant strengths in real-time. The work of escaping the clutches of systemic poverty requires not only real-time 'focus' but real-time 'ACTION' as well. Project Phoenix sets the foundation for construction skills enhancement. Successful program participants are identified and 'promoted' into the M.A.P.P. based on identified aptitude and encouraged to proactively position themselves to earn direct entry into the trade-craft they have expressed in or shown a natural affinity to.

GET STARTED:

For more information visit their website:
mappinc.org





ROCHESTER CAREERS IN CONSTRUCTION DAY

**SCHEDULED FOR EVERY FALL
MONROE COUNTY FLEET CENTER**

Join us for our Annual Careers in Construction Day! Introducing students to the exciting career options that the local construction industry offers in a fun, interactive format. There will be employers, apprenticeship programs, and college program representatives joining us for the career fair. We will have hands-on activities, equipment trials and demonstrations, booths, and more!

**SAVE THE DATE! TO LEARN MORE, VISIT:
ROCHESTERCAREERSINCONSTRUCTION.COM/CAREER-FAIR**

**"CONSTRUCTION IS MORE THAN A JOB. ITS A
CAREER WITH HIGH DEMAND, HIGH SALARIES
AND HIGH POTENTIAL."**



RCCI - ROCHESTER CAREERS IN CONSTRUCTION, INC

MISSION

Rochester Careers in Construction, Inc (RCCI) is a local non-profit with a mission to expose individuals to the limitless career possibilities that the construction industry provides. Through educating the community and giving job training to students, RCCI is working to enrich and embolden our area's youth to choose to make their path in the construction industry!

CAREER FAIR

Every year, Rochester Careers in Construction, Inc. partners with Monroe County and area schools, employers, and unions to host the Annual Rochester Careers in Construction Day. The event introduces students to the exciting career options in construction in a fun, interactive format with hands-on activities and engaging materials. Representatives from employers, universities, and apprenticeship programs all come together to showcase what our regional construction industry has to offer.

EDUCATORS DAY

Each year during National Apprenticeship Week, RCCI teams up with regional building trades unions to invite middle and high school educators, career counselors, and teachers to explore career pathways in construction. The goal is for educators to be able to better guide students down career pathways in construction through panel discussions, hands-on demonstrations, and opportunities to speak with current apprentices. RCCI also teams up with Rochester Technology and Manufacturing Association (RTMA) for the event to introduce teachers to pathways in the manufacturing trades.

LEARN MORE:

For more information visit their website:
rochestercareersinconstruction.com



YOUTHBUILD - URBAN LEAGUE OF ROCHESTER

CONSTRUCTION TRAINING OPPORTUNITY FOR HIGH SCHOOL DROP-OUTS

YouthBuild Rochester serves individuals ages 18 to 24 who have dropped out of high school. The goals of the program are for participants to obtain a high school equivalency diploma and/or industry-recognized certificate; increase literacy and numeracy; and employment or enrollment in post-secondary education.

Participants receive stipends while they attend TASC classes and complete a 144-hour Pre-Apprenticeship Construction Training (PACT) course, and gain hands-on experience building homes with Habitat for Humanity and other construction partners. Participants are also able to participate in the YouthBuild Green Initiative, which provides students with training around environmental awareness and the concepts and techniques of green construction.

Key partners of the program are Monroe Community College, Flower City Habitat for Humanity, RochesterWorks, and the Urban League of Rochester Economic Development Corporation (ULREDC).

PROGRAM SERVICES

- Intensive case management
- GED/TASC instruction
- Sectoral training in construction and advanced manufacturing
- Leadership development activities
- Job placement assistance
- Follow-up services

YOUTHBUILD NAVIGATOR

YouthBuild Navigator is designed similarly to YouthBuild Rochester and provides guidance and assistance to out-of-school youth ages 16 to 24 to achieve academic and employment success. The program helps to remove barriers to achievement and provides opportunities for training, career exploration, work experience, and employment.

GET STARTED:

For more information visit their website:
urbanleagueroc.org/workforce#anchoyouthbuild



Urban League of
Rochester, N.Y., Inc.

URBAN LEAGUE OF ROCHESTER

PROJECT B.E.A.M.

Project B.E.A.M. (Build, Educate, Advance, and Motivate) serves individuals ages 25 and older, who are currently on parole or probation or formerly incarcerated in the adult criminal justice system and released from jail or prison within 180 days of enrollment.

The program seeks to improve their workforce outcomes by addressing barriers while helping them attain in-demand occupational and employment skills and apprenticeship opportunities needed to obtain good jobs.

The program offers participants four distinct Career Pathways in high-growth industries: Advanced Manufacturing, Construction, Healthcare, and Food Service.

PROGRAM SERVICES

- Job readiness training
- TASC (GED) instruction
- Occupational skills training
- Case management
- 12-month follow-up services
- Supportive service referrals
- Advocacy services

PROJECT STEPS TO SUCCESS

Project Steps to Success serves individuals ages 18 to 24.

This program improves the workforce outcomes of justice-system-involved young adults by addressing employment and education barriers. The program equips participants with tools to attain industry-recognized credentials in high-growth industries, including construction, healthcare, advanced manufacturing, and food service while also providing case management, job readiness training, and support in attaining High School Equivalency diplomas.

PROGRAM SERVICES

- Case management
- Cognitive behavioral therapy
- Job readiness training
- Legal services
- Academic instruction
- Follow-up services

GET STARTED:

For more information visit their website:
urbanleagueroc.org/workforce



Urban League of
Rochester, N.Y., Inc.

LEARN MORE



UNICON'S MISSION

Our mission is to build strong relationships with local businesses, developing partnerships with local schools, colleges and universities and by working closely with local leaders, both public and private, to secure initiatives and projects across the Empire State.

To that end, we work to generate opportunity for our local engineering firms and to advertise, enhance and promote the economic advantages and competitiveness of our unionized partners within the construction industry.

We work closely with Rochester Careers In Construction, Inc. and other industry groups to achieve success in workforce and economic development.

REGIONAL CONTACTS

Information on most Building Trades Unions can be found on the following websites:

North American Building and Construction Trades Council — www.nabtu.org

UNiCON Rochester — www.uniconrochester.com

Another great resource for construction career information which includes free printables, career maps, and a profile test that matches students to specific trades in the construction industry!

Build Your Future — www.byf.org



VISIT US ONLINE:

For more information visit:
rochestercareersinconstruction.com
uniconroc.com

DEDICATED TO BUILDING A BETTER COMMUNITY

UNiCON
Unions and Businesses
United in Construction



ENHANCING OPPORTUNITIES FOR OUR CONSTRUCTION INDUSTRY BY:

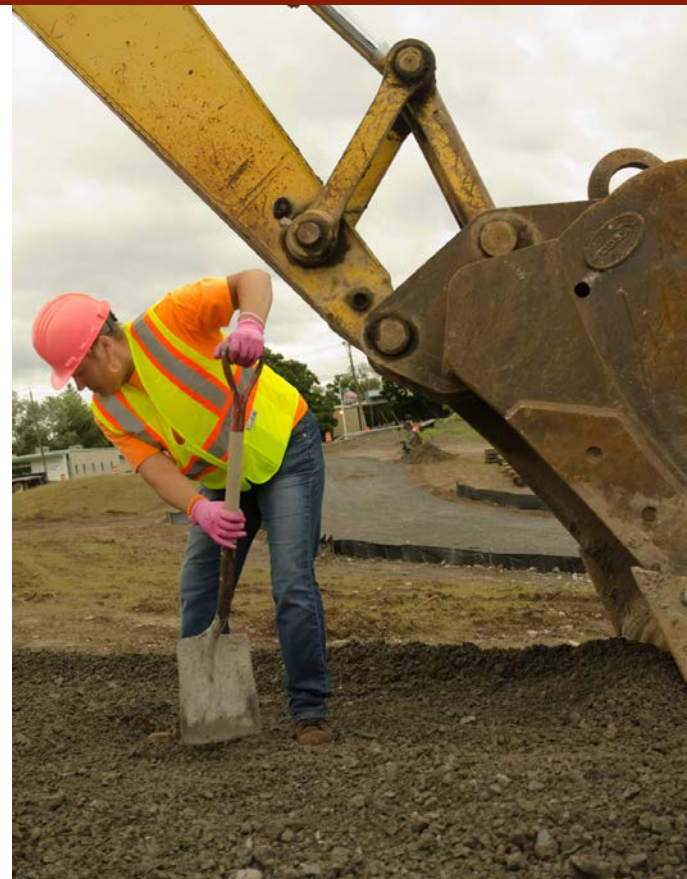
- Strengthening our Local Workforce through Recruitment & Training Initiatives
- Generating Opportunities for our Local Contractors
- Building Up our Community and Local Economy

OUR MISSION

Our mission is to build strong relationships with local businesses, developing partnerships with local schools, colleges and universities and by working closely with local leaders, both public and private, to secure initiatives and projects across the Empire State.

WHO WE ARE

UNiCON – Unions and Businesses United in Construction – is an association of construction industry professionals within the institutional, industrial, commercial, and residential construction industries in the 9-county Finger Lakes Region of Upstate New York. We are comprised of 19 building trades unions representing over 10,000 unionized construction workers, affiliated Labor/Management Associations combining over 350 construction contractors and members of the American Council of Engineering Companies (ACEC).



2022 RESOURCE GUIDE FOR THE CONSTRUCTION INDUSTRY

BROUGHT TO YOU BY



UNICON - Unions and Businesses United in Construction strives to inform students and educators of the highly technical and rewarding careers available in the construction industry.

We believe that construction careers are as unique and diverse as each individual student. This guide offers a glimpse into the wide variety of career choices so that students can begin to prepare themselves for a challenging and exciting future in the construction field.

For your convenience, an online version of this guide can be found on our website www.uniconrochester.com. Through innovative programs and opportunities, we strive to create a future workforce that has the skills, training and abilities to offer the highest quality of craftsmanship.

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CHECK OUT OUR OTHER RESOURCES

Visit our website for electronic, printable guides and resources to help job seekers and students understand the many different types of careers available in the construction industry. We have created free trading cards, apprentice flyers, and more for your use!

uniconroc.com/resources

The Construction Industry Association of Rochester (CIAR) is a not-for-profit association established to support and promote union contractors in the building and construction industry across the Rochester region.

CIAR Goals:

- Promote union contractors
- Promote careers in the construction industry and apprenticeship
- Enable productive and open communication between labor and management
- Serve as a forum for contractors to address industry concerns
- Serve as the negotiation support team for management
- Appoint and/or serve as trustees on Taft-Hartley Funds

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This Resource Guide is made possible through partnership with the Workforce Development Institute (WDI).



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