

National Institute for

**NICE**

Construction Excellence

## **Construction Career Handbook**



**Second Edition**  
**[www.nice-kc.com](http://www.nice-kc.com)**



# Welcome!

Greetings as you begin to use this guide that was created to provide a thoughtful view into the career opportunities that are available within the skilled trades. We hope your review of this information will help you make a meaningful decision that will bring you positive results for the rest of your life. As you review this information, keep in mind that:

- the work product described here is important to each and every part of what all of us experience in our daily lives; and
- the salary and benefits for these career paths are truly rewarding. Apprentices usually start out making an average wage near \$20.00 per hour plus benefits that impact your quality of life in the present, and in your later years. Once you complete the apprenticeship program and enter your status as a Journeyman, the average starting wage is near \$40.00 per hour plus the same benefits you've been building since your first day. These are career pathways that will provide you with a high quality of life and the earning power to have disposable income to use to achieve your dreams.

It is our objective to engage the community at large in support of our mission. We are proud to work in conjunction with our Building & Trade partners to provide this Construction Career Handbook.

*Congratulations on taking this step in building your personal achievements.*





*At the National Institute for Construction Excellence (NICE), a 501 (c)(3) not-for-profit, it is our goal to provide students, educators and parents with resources and work experience opportunities intended to inspire interest in employment opportunities in construction and related industries.*

*NICE programs are designed to integrate academics and life skills while exposing students to career opportunities within the construction industry. It is our mission to develop the next generation of builders that will contribute to the advancement of our society by following these guiding principles:*

- **Passion for the construction industry**
- **Investment in Youth**
- **Developing a diverse and inclusive talent pipeline**
- **Career and economic opportunities**

## **Current Programs:**

**INSTITUTE FOR SHAPING THE BUILT ENVIRONMENT (ISBE)** is a middle school curriculum to provide awareness of construction careers and to apply academic skills to real life construction projects.

**HIGH SCHOOL CAD COMPETITION** is in partnership with NAWIC to provide a CAD project designed by an architect in which students can compete locally, regionally, and nationally.

**SENIORS' DAYS** are offered throughout the school year and highlight a partnership with the skilled trades to introduce high school seniors to skilled trades' apprenticeship programs.

**CAREER EXPLORATION EPISODES** are virtual visits that continue to offer high school students' access to beneficial information to help them gauge the value of careers within the construction industry. This series of Zoom webinar episodes highlights the skilled trades as well as other contractors that are seeking the future workforce. These episodes will accumulate to create a strong resource library that will be accessible only through the NICE website.

**EDUCATORS' DAY** allows counselors and teachers to engage in positive, hands-on activities with various skilled trades to become informed about the career options for their students through the apprenticeship programs.

**CONSTRUCTION CAREER HANDBOOK** Newly designed means to convey important information about the skilled trades in a consistent, uniform manner.

**RESILIENT AND EFFICIENT CODES IMPLEMENTATION** Newly funded program through the US Department of Energy that promotes career pathways that monitor and oversee the utilization of green energy codes and technology in new building construction.

**OSHA-10 CERTIFICATION** will allow high school juniors and seniors interested in the industry, especially a career path with a skilled trade, the opportunity to obtain this valuable & necessary safety credential prior to graduation and increase their eligibility for apprenticeship application.

**IBUILD SHOWCASE** is the culminating event of all the student/educator engagement that we offer during the academic year and provides area schools an overview of the construction industry through interactive, hands-on activities to encourage middle school and high school students to consider careers in the construction industry.

**SUMMER EDUCATOR EXTERNSHIP** is designed to identify and engage middle school and high school educators from school districts in the Kansas City region that have historically not been engaged with NICE in any of its programs and events, while increasing the understanding and connection of educators to the industry.

# Boilermakers

## ***What scope of work do those within your trade complete?***

The Boilermaker scope of work involves many things from shipbuilding to power generation, any industry that changes one product into something else through the use of pressure vessels is where you will find us.

There many skills important to the Boilermaker, we focus on welding, but also need individuals who can fabricate, interpret blueprints, and rig components for installation.

Since we are a construction trade a majority of the work performed by Boilermakers is done outside in the elements. It can be done in a confined space or hundreds of feet off the ground.

## ***What are the physical requirements for those within your trade?***

Being able to work in many environments, such as cramped spaces, 50 feet or more above the ground, and able to do strenuous task for 10 to 12 hours a day, 6 to 7 days a weeks is important. Many tasks require standing for extended periods, climbing stairs and ladders frequently, and lifting heavy objects.

## ***What is the scope of training for a new apprentice in your trade?***

Our apprentices receive training through a mix of online courses, classroom activities, and on the job tasks. Our apprentices will receive 6000 hours of on the job experience and 600 hours of classroom instruction. In the classroom you will cover many aspects of the job, including rigging calculations, welding metallurgy, safety, and blueprint/fabrication projects.

## ***What are the application requirements for a prospective apprenticeship?***

Our applications are done online through our website [BML83.org](http://BML83.org), or [Boilermakers-SAJAC.org](http://Boilermakers-SAJAC.org) and require you to be 18 and have a high school diploma or GED.

## ***What are some core academic concepts used in your trade?***

Our rigging fundamentals class covers the various ways to calculate the weight of objects and to estimate the forces applied to the rigging components and any structure that supports the object.

## ***Training Center Address:***

5910 E 86th Street, Kansas City, MO 64138

## ***Training Center Website:***

[BML83.org](http://BML83.org)



# Bricklayers

## ***What scope of work do those within your trade complete?***

Bricklayers use their talents and training to properly position masonry units, creating efficient, beautiful buildings and structures. The bricklayer's role in the construction of buildings is normally, but not limited to, building walls. Bricklayers usually work outdoors, creating the structure of a building, and also installing facades. The work must be coordinated with other trades to ensure the buildings are completed on schedule.

Restoration Specialists/Pointer,Caulker,Cleaner (PCC)- Restoration specialists have the opportunity to help bring historic structures and landmarks back to their original glory, and to repair and maintain existing masonry buildings. PCCs learn how to properly clean masonry materials, how to caulk or apply sealants to expansion joints, remove and replace mortar between masonry units (pointing) in both new and old buildings.

Tile, Marble, Terrazzo workers- Tile layers, or tile setters, install ceramic, granite, porcelain, glass, or stone tile that you see in showers, countertops, floors, walls, mosaics, patios, fountains, swimming pools, and more. Many times, they install a thick mortar base of sand, cement, and lime to create a flat or curved surface for the tile installation. Marble masons learn how to cut, tool, and set marble slabs for floors and walls. They also trim, polish, and cut marble to specified sizes. Terrazzo mechanics install terrazzo floors, medallions, countertops, steps, and more according to blueprints or project specifications. They are responsible for the layout and installation of floating beds, divider strips, pattern designs, and more. Other duties include pouring, rolling, grinding, polishing, and the repair of terrazzo.

## ***What are the physical requirements for those within your trade?***

All applicants shall be physically capable of performing the essential functions of the apprenticeship program without posing a direct threat to the health and safety to the individual or others.

## ***What is the scope of training for a new apprentice in your trade?***

Bricklayers and PCC apprenticeship programs are 3.5 years long and consist of 546 hours of Related Training and 4,900 hours of On-The-Job training. Related Training classes take place two days each month, September through June. Tile/Marble/Terrazzo classes are one night per week.

## ***What are the application requirements for a prospective apprenticeship?***

All applicants shall be at least eighteen (18) years of age.  
All applicants must provide documentation that establishes both identity and employment authorization as required by the United States Citizenship and Immigration Services, Form I-9

## ***What are some core academic concepts used in your trade?***

Apprentices will spend time in the academics of:  
Math, Building Science, Safety, Communications and Masonry History

## ***Training Center Address:***

105 W 12th Avenue, North Kansas City, MO 64116

## ***Training Center Website:***

wetrainbac15.org



# Carpenters

## ***What scope of work do those within your trade complete?***

Carpenters are responsible for bringing an architect's blueprints to life by working with wood, fiberglass, metal, vinyl, plastic, and other materials to create the interior and exterior structures. They work on everything from concrete forms, bridges, modular furniture, wood framing, metal framing, finish work and welding. Work is usually outdoors or indoors year-round and very physical. Hardhats, safety glasses, durable clothing and safety shoes are the typical items worn on a site.

## ***What are the physical requirements for those within your trade?***

Lifting, pushing, pulling and bending are common. But you are trained on how to do these tasks safely before ever attempting anything like that on a jobsite.

## ***What is the scope of training for a new apprentice in your trade?***

From the first day of a person's apprenticeship, they will work for a Union contractor under the protection of a Union contract, which outlines wages, benefits and working conditions. Apprentices study both in the classroom and on-the-job, under the guidance of skilled workers of the trade, called journeymen. In most cases, the length of your apprenticeship is four years, and training is free. Apprentices earn a good income and learn a trade-- all at once.

## ***What are the application requirements for a prospective apprenticeship?***

They can start by applying to Apprenticeship program at [www.carpdc.org](http://www.carpdc.org) and then an Outreach Specialist will follow up with them to answer further questions.

## ***What are some core academic concepts used in your trade?***

You can get a head start on becoming a carpenter by studying math (algebra) and enrolling in a shop class in school. Classes in industrial arts and CAD will help you decide whether or not you have an interest in this trade.

## ***Training Center Address:***

8955 E. 38th Terrace, Kansas City, MO 64129

## ***Training Center Website:***

[www.carpdc.org](http://www.carpdc.org)



# Cement Masons

## ***What scope of work do those within your trade complete?***

A Cement Mason finishes the exposed concrete surfaces on many types of construction projects-ranging from small patios, sidewalks, and floors, to miles of highway, curb, large foundations, walls, and floors of large buildings. First using a straight-edge, mag float, and bull-float to fill depressions and remove high spots, and to draw cement to the surface of the mixture in preparation of the final finishing operations; then continuing with darby's, trowels, walk-behind trowel machines, riding trowels. The cement finisher's knowledge of materials is essential to the quality of work. They must learn to be familiar with working characteristics of cement and concrete mixes, such as those containing substances to speed or slow down the setting time, and those, which are used to construct weight-supporting walls or surfaces of specified strength.

## ***What are the physical requirements for those within your trade?***

Must be physically able to perform the work.

## ***What is the scope of training for a new apprentice in your trade?***

Our apprentices attend school/training 4 days a week for 1 week per month, from October to May. All apprentices work in the field before training as we hire year round.

## ***What are the application requirements for a prospective apprenticeship?***

We take applications on the 1st and 3rd Monday of every month. You must be 18, you must have a drivers license or be able to obtain one with-in 6 months, and you must pass a drug test.

## ***What are some core academic concepts used in your trade?***

The most important to start is their OSHA 10, how to read a tape measure, and core math. We will teach everything they need, but these things are helpful.

## ***Training Center Address:***

105 W 12th Avenue, North Kansas City, MO 64116

## ***Training Center Website:***

OPCMIA518.org



# Drywall Finishers

## ***What scope of work do those within your trade complete?***

Drywall finishers prepare unfinished interior drywall panels for painting by taping and finishing joints and imperfections. Using the wide, flat tip of a special trowel, drywall finishers spread joint compound into and along each side of the joint between two hung drywall panels and use a paper tape to cover the seams between panels, resulting in a uniform and almost perfect surface.

## ***What are the physical requirements for those within your trade?***

Use stomach and lower back muscles to support the body for long periods without getting tired. Bend, stretch, twist, or reach out. Hold the arm and hand in one position or hold the hand steady while moving the arm. Have the ability to see imperfections and correct them.

## ***What is the scope of training for a new apprentice in your trade?***

Training consists of working with contractors and class attendance of two eight-hour days, once a month, with curriculum approved by the Department of Labor. Rate increases will be yearly with 160 class hours and 1600 on the job work hours over a four-year program with a total of 640 class hours and 6400 on the job work hours for completion of program.

## ***What are the application requirements for a prospective apprenticeship?***

Applications are accepted Monday through Thursday from 8:00 AM until 10:00 AM. Applicants for Apprenticeship must be at least 18 years of age. Must be able to perform essential job functions of the trade. All applicants must produce a Birth Certificate, high school diploma or G.E.D. and pass drug screening prior to going to work.

## ***What are some core academic concepts used in your trade?***

Drywall Finishers will need math skills in order to figure square footage, volume for liquids, ability to read a tape measure for measuring beads. The ability to read blueprints and specifications to apply various trims and specific finishes associated with substrates on various jobs.

## ***Training Center Address:***

105 W. 12th Avenue, North Kansas City, MO 64116

## ***Training Center Website:***

iupatdc3.com



# Electricians

## ***What scope of work do those within your trade complete?***

Trained Journeyman Inside Wiremen perform installation and maintenance for commercial office buildings and industrial complexes. In the course of this many different kinds of tools are used, ranging from simple hand tools to power assisted tools while occasionally operate heavy equipment.

## ***What are the physical requirements for those within your trade?***

Must be able to perform job functions

## ***What is the scope of training for a new apprentice in your trade?***

Work is generally expected to be full time (40 hours a week). Apprentices train on-the-job to proficiency in installation, maintenance and troubleshooting of various electrical systems under the guidance of Journeyman Inside Wiremen.

Over the course of the five year Inside Wireman program, apprentices acquire knowledge and necessary skills via on-the-job training and classroom learning (8000 Hours of On-the-Job Training / 900 Hours of Related Study). The school year runs August through June with a winter break. Class time is spent in lecture and hands-on lab formats, with homework due via our online training system. Apprentices will be expected to have internet access and a Windows-based computer with which to complete homework. Apprentices pay no tuition for their classes, but they are required to purchase their own tools and pay for their books each year. Book costs range from \$400.00 to \$1,000.00 for any given year.

## ***What are the application requirements for a prospective apprenticeship?***

Apprenticeship applications may be completed online anytime at [www.kcjatc124.org](http://www.kcjatc124.org), or in person on the first Wednesday of the month from 12:00 PM to 6:00 PM. All applicants will be required to pay a non-refundable \$25.00 application fee (no personal checks). Applicants have 30 days from the date of their application to turn in all required documentation. A pool of eligible applicants shall be created consisting of individuals who qualify and complete the interview process. To qualify for an oral interview an applicant must meet one of the following sets of requirements:

- Be at least 17 years of age to apply and a minimum of 18 years old at the time of selection and indenture. Bring in your birth certificate or other official documentation of date of birth.
- Provide proof of education.
- Bring OFFICIAL transcripts for high school or college experience. The transcript must show the applicant has successfully completed at least one of the following: high school algebra, post-high school algebra or an online algebra or tech math course.
- Qualify for an interview by obtaining a passing score on the electrical trade's aptitude test.
- Possess a valid driver's license.

OR

Work Experience:

- Provide proof of at least 4,000 substantiated electrical construction work hours; and birth certificate.

\*\*\*If currently or previously in the military, you must submit a DD-214 to verify your military training and show a release from active duty\*\*\*

## ***What are some core academic concepts used in your trade?***

Algebra 1 and Reading Comprehension are skills needed in our trade

***Training Center Address:*** 303 E. 103rd Terrace, Kansas City, MO 64114

***Training Center Website:*** [www.kcjatc124.org](http://www.kcjatc124.org)



# Elevator Constructors

## ***What scope of work do those within your trade complete?***

Our members install, maintain, and replace elevators, escalators, and moving walks. They spend their work days on construction sites installing new units. Or, in occupied buildings maintaining existing units.

## ***What are the physical requirements for those within your trade?***

Be willing to work in high places or tight spaces. To work in the elements that go along with a construction site (possible extreme heat and cold). Be able to lift carry and move around 100 lbs multiple times a day.

## ***What is the scope of training for a new apprentice in your trade?***

All apprentices receive a combination of on the job training (8,000 hours), and eight semesters of classroom training. The courses cover electrical, mechanical, and safety training used in our industry. For every two semesters completed and 2000 on the job training hours the apprentice receives a year certificate and advances to the next year of apprenticeship.

## ***What are the application requirements for a prospective apprenticeship?***

You must be 18 and a high school graduate or equivalent to apply.

## ***What are some core academic concepts used in your trade?***

Our curriculum uses math and physics concepts. The electrical training requires many algebra type formulas to calculate ohms law and power formulas. The mechanical training also uses volume and conversion formulas for hydraulic pressures and speeds to over all weights for load capacities.

## ***Training Center Address:***

6320 Manchester Avenue, Unit 44, Kansas City, MO 64133

## ***Training Center Website:***

[www.neiep.org](http://www.neiep.org)



# Floor Layers

## ***What scope of work do those within your trade complete?***

Floor Layers are responsible for installing all types of flooring materials including carpet, laminates, and vinyl. Work is often done based on specifications of architects and interior designers. Floor Layers are good at estimating materials and understanding pattern layouts. They also know the safe and proper use of tools, adhesives and fastening systems.

## ***What are the physical requirements for those within your trade?***

Most of the work they complete is done indoors, except for the installation of outdoor carpets and sporting venues. It's a physical job. Lifting, pushing, pulling and bending are common. But you are trained on how to do these tasks safely before ever attempting anything like that on a jobsite.

## ***What is the scope of training for a new apprentice in your trade?***

From the first day of a person's apprenticeship, they will work for a Union contractor under the protection of a Union contract, which outlines wages, benefits and working conditions. Apprentices study both in the classroom and on-the-job, under the guidance of skilled workers of the trade, called journeymen. In most cases, the length of your apprenticeship is four years, and training is free. Apprentices earn a good income and learn a trade—all at once.

## ***What are the application requirements for a prospective apprenticeship?***

They can start by applying to Apprenticeship program at [www.carpdc.org](http://www.carpdc.org) and then an Outreach Specialist will follow up with them, to answer further questions.

## ***What are some core academic concepts used in your trade?***

You can get a head start on becoming a Floor Layer by studying math (algebra) and enrolling in a shop class in school. Classes in industrial arts and CAD will help you decide whether or not you have an interest in professional flooring installation.

## ***Training Center Address:***

8955 E. 38th Terrace, Kansas City, MO 64129

## ***Training Center Website:***

[www.carpdc.org](http://www.carpdc.org)



# Glaziers

## ***What scope of work do those within your trade complete?***

Glaziers (or glassworkers) are responsible for selecting, cutting, installing and replacing all types of glass used in construction. On commercial interior projects, glaziers often fit glass for tabletops and display cases and install decorative glass walls, storefront windows and security windows. Glaziers also work on the glass exteriors of large commercial buildings.

## ***What are the physical requirements for those within your trade?***

Glaziers may need to work at great heights. As in many other construction trades, the work of glaziers is physically demanding. Glaziers spend most of the day standing, bending, or reaching, and they often must lift and maneuver heavy, cumbersome materials, such as large glass units.

## ***What is the scope of training for a new apprentice in your trade?***

Glaziers learn their trade through a 4-year apprenticeship that includes class time and on-the-job training. Yearly rate increases throughout the program will require 160 hours class and 1600 hours on-the-job training with a total of 640 class hours and 6400 on-the-job training hours for completion of the program.

## ***What are the application requirements for a prospective apprenticeship?***

Each applicant must present a copy of the following documents at the time of making application:

1. Birth Certificate.
2. Valid State issued Driver's License.
3. High School diploma, G.E.D. or High School transcripts, certificate, or proof of enrollment in a certified General Education Program.
4. \$20.00 money order for application fee.

## ***What are some core academic concepts used in your trade?***

Glaziers will learn to use the tools and equipment of the trade; handle, measure, cut, and install glass and metal framing; cut and fit moldings. Lifting and installing different types of glass and aluminum frames, working at heights involving ladders, scaffolding and other types of man lifting devices. Also involved are precise readings of measurements and working with a variety of hand tools and power tools.

## ***Training Center Address:***

105 W 12th Avenue, North Kansas City, MO 64116

## ***Training Center Website:***

iupatdc3.com



# Heat and Frost Insulators

## ***What scope of work do those within your trade complete?***

Insulators work with a wide variety of materials in all sorts of weather conditions and locations across the metropolitan area with opportunities to travel. Materials include many variations of insulation, such as fiberglass, mineral wool, Styrofoam, cal-sil and armaflex rubber. These materials are often covered with metal, PVC Plastic, paint or canvas.

## ***What are the physical requirements for those within your trade?***

Physical strength is a large part of daily tasks, often requiring lifting of materials weighing up to 80 lbs, large boxes and rolls of materials and occasionally equipment. Climbing of ladders, stairs and scaffolding are often daily tasks. Working from heights, either from ladders, scaffolds or lifts often occur. Extreme hot and cold conditions can be part of the job depending on weather or type of facility the work is in.

## ***What is the scope of training for a new apprentice in your trade?***

Training is provided through a 4 year Apprenticeship consisting of 160 hours a year. Classes are usually held on weekday evenings after work or weekends. You will receive hands on training with materials and tools needed to complete daily tasks.

## ***What are the application requirements for a prospective apprenticeship?***

Must be 18 years old. Must have Drivers License, Social Security Card, Birth Certificate and High School Diploma or GED.

## ***What are some core academic concepts used in your trade?***

Basic Math is a must, as we add, subtract, multiply and divide numbers and fractions. Metal and material layouts do use some basic geometry. We give introductions into the many aspects of a work site including print ready, tool handling, introduction to materials used daily, metal layout patters and safety equipment.

## ***Training Center Address:***

400 S. Main, Independence, MO 64050.  
Our office number is 816-252-0588.

## ***Training Center Website:***

New Site Pending



# Ironworkers

## ***What scope of work do those within your trade complete?***

The work that Ironworkers perform falls into several related segments, and most Ironworkers will do more than one type of work. Structural Ironworkers unload and erect fabricated steel and pre-cast concrete panels and install metal decking and sheeting. Ornamental Ironworkers install curtain-wall and window systems, as well as stairways, catwalks, grating, ladders, doors, railings, fencing, gates, guardrail, and platforms. Reinforcing Ironworkers place rebar, mesh, composite bars, and post-tensioning cables in structures wherever concrete is used. Rigging Ironworkers unload, move, and set machinery and other challenging objects within our jurisdiction.

## ***What are the physical requirements for those within your trade?***

Physical strength is critical to becoming an Ironworker because you will be required to lift and carry items weighing approximately 65 pounds; climb and work from ladders; bend, stoop, and work in inclement weather conditions. You will need physical stamina to be able to stand for long periods at a time as well.

## ***What is the scope of training for a new apprentice in your trade?***

The Ironworkers Local 10 Apprenticeship Program should take approximately four (4) years to complete and consists of 6,750 on-the-job training hours, as well as 824 classroom and shop hours. The training focuses on all aspects of commercial steel construction including welding, structural steel erection, reinforcing steel installation, architectural and ornamental construction, precast concrete erection, and pre-engineered metal buildings. After an applicant has been accepted into the apprenticeship, they will be scheduled for class in one (1) week blocks every other month (4 weeks per year). Once all class requirements have been met and all on-the-job hours attained, Journeyman status will be awarded.

## ***What are the application requirements for a prospective apprenticeship?***

18 years of age. Valid drivers license. High school diploma or GED.

## ***What are some core academic concepts used in your trade?***

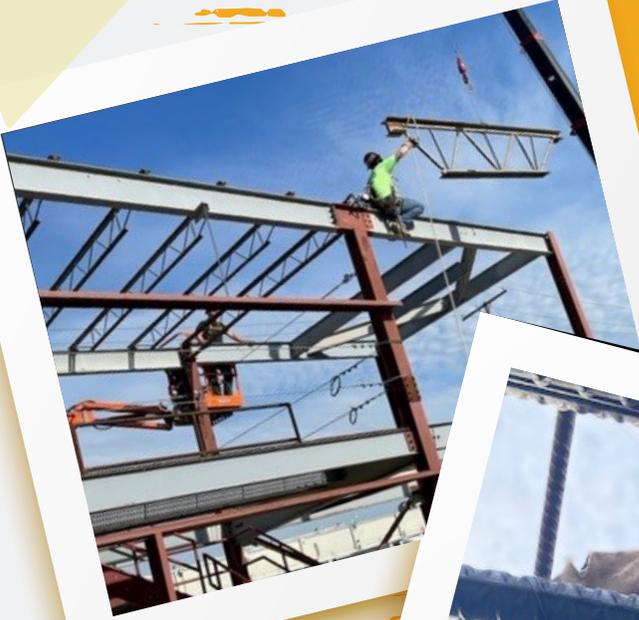
Core academics include blueprints, construction math, and welding technology.

## ***Training Center Address:***

Mokan Ironworkers Apprenticeship and Training  
105 West 12th Avenue, North Kansas City MO 64116

## ***Training Center Website:***

[www.ironworkers10.com](http://www.ironworkers10.com)



# Laborers

## ***What scope of work do those within your trade complete?***

From the first survey, directing the dirt work, setting the forms, pouring the concrete, laying the asphalt, building the building, and setting up the offices. From everyday cleaning to the final clean before the job is turned over to the customer, Union Laborers play key roles in each step.

## ***What are the physical requirements for those within your trade?***

Good overall physical health and flexibility. Some jobs are very physically demanding, and others have more mental/organizational requirements. Most common thing is to being fit enough to spend the day on your feet and moving with the work.

## ***What is the scope of training for a new apprentice in your trade?***

Our apprentices are required to complete a minimum of 4 week-long courses per year (12 classes total) here at the training center. The courses have a wide variety to cover the kinds of construction we labor in. The courses include: job site hazard awareness, applied math, forming and concrete placement, demolition torches, off road forklifts, scaffold building, and pipe laying.

## ***What are the application requirements for a prospective apprenticeship?***

High School Diploma or GED

## ***What are some core academic concepts used in your trade?***

We use the Pythagorean Theory to square our forms

## ***Training Center Address:***

21201 South Mullen Road, Belton, MO 64012

## ***Training Center Website:***

MoKanLTC.com



# Millwrights

## ***What scope of work do those within your trade complete?***

Millwrights install, maintain, diagnose and repair industrial machines that usually cost millions of dollars. Work is done on compressors, pumps, conveyors, monorails, extruders, turbines and mining equipment using hand and power tools, including welding equipment. Millwrights may have to adjust a machine's calibration just the width of a human hair and increase its productivity by 20%.

## ***What are the physical requirements for those within your trade?***

A millwright has to be prepared to work in any condition, inside or out, clean or dirty, wet or dry, hot or cold. It's a physical job. Lifting, pushing, pulling and bending are common. But you are trained on how to do these tasks safely before ever attempting anything like that on a jobsite.

## ***What is the scope of training for a new apprentice in your trade?***

From the first day of a person's apprenticeship, they will work for a Union contractor under the protection of a Union contract, which outlines wages, benefits and working conditions. Apprentices study both in the classroom and on-the-job, under the guidance of skilled workers of the trade, called journeymen. In most cases, the length of your apprenticeship is four years, and training is free. Apprentices earn a good income and learn a trade-- all at once.

## ***What are the application requirements for a prospective apprenticeship?***

They can start by applying to Apprenticeship program at [www.carpdc.org](http://www.carpdc.org) and then an Outreach Specialist will follow up with them, to answer further questions.

## ***What are some core academic concepts used in your trade?***

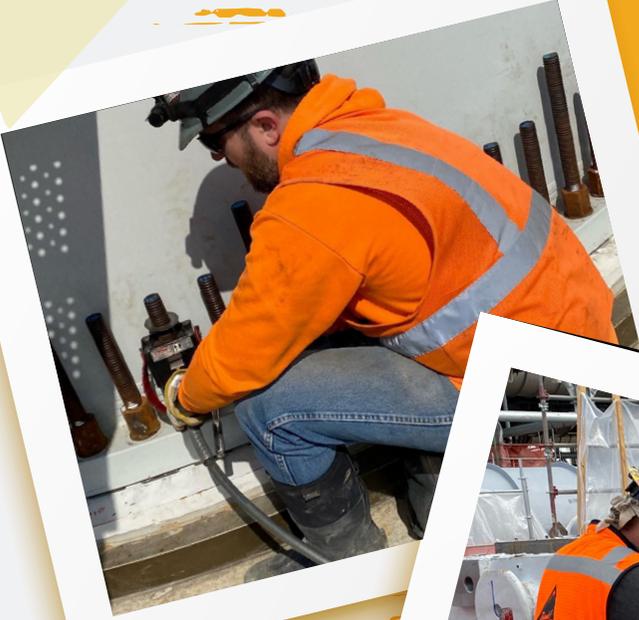
You can get a head start on becoming a millwright by taking classes in mathematics (algebra & geometry), drafting, mechanical drawing, industrial arts and CAD. It will be to your advantage to enroll in an industrial shop class (welding) as well.

## ***Training Center Address:***

8955 E. 38th Terrace, Kansas City, MO 64129

## ***Training Center Website:***

[www.carpdc.org](http://www.carpdc.org)



# Operating Engineers

## ***What scope of work do those within your trade complete?***

Operating Engineers Local 101 are responsible for the operations and maintenance of heavy equipment. Members in local 101 hold a lot of responsibility to perform operations efficiently and safely. Most often times others' lives depend on you for correct excavations and moving heavy loads. Operating heavy equipment is effected by weather, so when weather is good work will be busy. This means days, nights and weekends ranging past 10 hour days in extreme temperatures with dust, mud and snow.

## ***What are the physical requirements for those within your trade?***

Operators need to be in good physical health. Being able to climb and move around equipment safely. Also being able to lift and move heavy objects is a must as stated this is HEAVY equipment so parts and maintenance usually aren't light. Physical health is important for passing DOT physicals but mental health is also very important as sometimes you will be alone all day in equipment by yourself. This can be hard for some individuals especially on long days and no sleep.

## ***What is the scope of training for a new apprentice in your trade?***

Local 101 accredited apprenticeship program is a three year 4,500-hour program. Students receive hours for on-the-job training in the field as well as at the training site. Each year students have a month of mandatory in-person school made up of safety training, nomenclature, maintenance, math and practical hands on training. The apprenticeship works hard with manufacturers and contractors to provide the most up-to-date knowledge in the industry. The instructors also provide training to apprentices in the field throughout the year for the most real world experience.

## ***What are the application requirements for a prospective apprenticeship?***

- 18 years of age
- Copy of birth certificate
- High school diploma/ Transcript or GED
- All Veterans DD-214
- Proof of Residency for the past six months in local 101 jurisdiction
- Valid drivers license
- Social security card
- OSHA 10 Construction

## ***What are some core academic concepts used in your trade?***

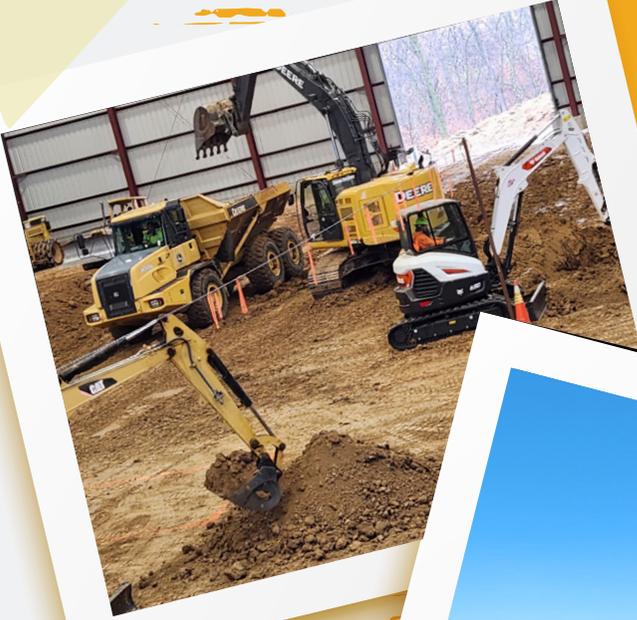
Adding, Subtracting, Multiplication, Division—all by hand, Algebra

## ***Training Center Address:***

22770 Rt. 273 Weston, MO 64098

## ***Training Center Website:***

<https://iuoelocal101.org>



# Painters

## ***What scope of work do those within your trade complete?***

Painters must be skilled in handling brushes and other painting tools in order to apply paint thoroughly, uniformly and rapidly to any type of paint composition and color harmony. Painters prepare the surfaces of buildings and other structures and then apply paint, varnish, enamel, lacquer, primer or sealer and similar materials to these surfaces. They must know the characteristics of common types of paints and finishes from the standpoint of durability, suitability for different purposes and ease of handling, also taking into account the method of application and job specifications.

## ***What are the physical requirements for those within your trade?***

Painters will need to be able to stand for long periods of time. Use their hands to handle, control, or feel objects, and tools. Repeat the same movements. Bend or twist their body. Climb ladders, scaffolds, or poles. Kneel, stoop, crouch, or crawl. Walk or run for long periods of time.

## ***What is the scope of training for a new apprentice in your trade?***

Painters learn their trade through a 4-year apprenticeship that includes class time and on-the-job training. Yearly rate increases throughout the apprenticeship program will require 160 hours class and 1600 on-the-job training with a total of 640 class hours and 6400 on-the-job training hours for Journeyman status.

## ***What are the application requirements for a prospective apprenticeship?***

Each applicant must present a copy of the following documents at the time of making application:

1. Birth Certificate.
2. High School diploma, G.E.D. or High School transcripts, certificate, or proof of enrollment in a certified General Education Program.
3. \$20.00 money order for application fee.

Applications will be accepted Monday through Thursday. The hours that applications will be accepted are from 8:00 AM until 10:00 AM.

## ***What are some core academic concepts used in your trade?***

Painters will learn to use the tools and equipment of the trade along with working at heights involving ladders, scaffolding and boom lifts. Blueprint reading and math for application of materials and usage.

## ***Training Center Address:***

105 W 12th Avenue, North Kansas City, MO 64116

## ***Training Center Website:***

iupatdc3.com



# Pipefitters

## ***What scope of work do those within your trade complete?***

Pipefitters design, install, maintain, and service process piping and HVACR systems. Pipefitters work in Virtual Design Construction (VDC) arenas to digitally design the systems and fab shops which fabricate the systems from raw materials. Pipefitters also work on the jobsites putting the systems together. Once built, Pipefitters maintain the systems and service them when issues arise. Jobsites range from the HVAC system in a retirement home, hospital or office building, refrigerated cases in the local supermarket to the steam supply system in one of the large powerhouses supplying electricity to the region.

## ***What are the physical requirements for those within your trade?***

Must be able to work in climatically challenged environments. Work is sometimes laborious and typically requires working high in the air in dirty climates.

## ***What is the scope of training for a new apprentice in your trade?***

Apprentices attend classes two nights a week for four hours, thirty weeks out of the year. Courses cover everything from math, science, and basic hand tools to digital controls, large-tonnage chilled water systems and robotic welding.

## ***What are the application requirements for a prospective apprenticeship?***

High school diploma/transcripts or GED, 18 years old with a valid driver's license.

## ***What are some core academic concepts used in your trade?***

Trigonometry and Physics

## ***Training Center Address:***

9876 Hickman Mills Drive, Kansas City, MO 64137

## ***Training Center Website:***

[pftc533.com](http://pftc533.com)



# Plumbers & Gasfitters

## ***What scope of work do those within your trade complete?***

Plumber and Gasfitter apprentices learn skills in piping layout, fabrication, and installation of plumbing systems. Plumbing apprentices work with various pipe joining processes; these include welding, soldering, grooving, flaring, and brazing. Common plumbing materials include copper, carbon steel, stainless steel, brass, ductile iron, and various plastics. Plumbing systems include sanitary waste and vent, storm water, domestic water, fuel gas systems, medical gases, deionized water, paint lines, and water heating equipment. Apprentices are expected to work efficiently, safely, and accurately. Our motto is We do it right the first time. Quality workmanship is expected to achieve long-lasting leak-free piping systems.

## ***What are the physical requirements for those within your trade?***

Candidates are required to work on various job sites and from elevated work surfaces. Apprentices must be able to climb, crawl, and work in confined spaces. Lifting, carrying, overhead drilling, and extended standing are required job tasks. Plumbing systems are installed in all climates.

## ***What is the scope of training for a new apprentice in your trade?***

Plumbers and Gasfitters Local 8 has a 5-year apprenticeship. Apprentices must complete 1750 on-the-job training hours and 240 hours of classroom instruction each year to advance. Classroom education is conducted from 5 to 9 pm on weeknights and on Saturdays. At the conclusion of your training, you will be required to pass your KCMO journeyman plumbing license.

## ***What are the application requirements for a prospective apprenticeship?***

To apply for entry into the Plumbers and Gasfitters Local 8 apprenticeship, visit our website: [Plumberslocal8trainingcenter.com](http://Plumberslocal8trainingcenter.com)

Required documents.

1. Birth Certificate
2. High School diploma or GED certificate (with scores)
3. A copy of your high school transcript

All applicants must pass a drug screen to work on job sites.

## ***What are some core academic concepts used in your trade?***

Plumbers use arithmetic, algebra, and trigonometry to install piping systems. Strong math skills are an essential requirement to perform plumbing work successfully.

## ***Training Center Address:***

5950 Manchester Trafficway, Kansas City, MO 64130

## ***Training Center Website:***

[Plumberslocal8trainingcenter.com](http://Plumberslocal8trainingcenter.com)



# Roofers

## ***What scope of work do those within your trade complete?***

Roofers Union work on commercial roofing. We do not do residential (shingles). Warehouses, Hospitals, Airports and high rise buildings is what we do. We work on new construction and we do re-roofs on old buildings. There are different roof systems like hot tar, torch down, TPO, EPDM, and coatings. Every job is different. No job is the same. We work in different weather elements in the hot summer to a 15 degree day. Roofers will work at high heights but we insure everyone is properly trained in safety.

## ***What are the physical requirements for those within your trade?***

You must be able to carry at least 50 lbs. be able to grasp, move or assemble objects. Use muscles to lift, push, pull or carry heavy objects. Be physically active for long periods of time. Move quickly, repeated bending and reaching. Be able to hear and recognize sounds and difference between them.

## ***What is the scope of training for a new apprentice in your trade?***

OSHA 30 is the first class you will attend. You will receive knowledge of different roof systems and the details to apply each system. Safety training to able to use in the field. Math class to be able to measure a roof, knowing how much materials you will need for a job. How to handle materials. Hands-on training as well on different details for each system. The course work is to get you ready for the trade and pursue becoming a Foreman, Superintendent, project manager or even an owner of a roofing company.

## ***What are the application requirements for a prospective apprenticeship?***

18 years of age.

## ***What are some core academic concepts used in your trade?***

Safety training and math is very important. We use a lot of Geometry in our trade for shapes, area, distance.

## ***Training Center Address:***

5100 E 59th Street, Kansas City, MO 64130

## ***Training Center Website:***

Rooferslocal20.com



# Sheet Metal Workers

## ***What scope of work do those within your trade complete?***

Sheet metal workers are involved with the applications of all types of sheet metal. Job opportunities are diverse and include fabrication, installation, and maintenance of heating, air conditioning, and ventilating systems as well as gutters, roofing, siding, or food service equipment. Architectural sheet metal workers fabricate and install metal ornamentation, columns, skylights, signs, and metal ceilings that add beauty to commercial and residential buildings.

## ***What are the physical requirements for those within your trade?***

Must be able to perform essential job functions of the trade, with due regard to aptitude, attitude, and personal characteristics. The applicant shall be subject to a medical examination and a urinalysis test for drugs, at no cost to you, and is required before being employed. Any applicant who refuses to take such a test will not be admitted.

## ***What is the scope of training for a new apprentice in your trade?***

First year apprentices attend school at least 240 hours a year with classes meeting five days a week, in six sessions per year. Second year apprentices build on the skills learned in the first year and increase their hands-on experiences. During their third year, apprentices are given increasingly responsible work assignments. They work with much less supervision on more complex projects. By the end of the fourth year, complex jobs are now easily handled because of the apprentice's knowledge. Much of the fourth-year curriculum is devoted to fine tuning existing skills.

## ***What are the application requirements for a prospective apprenticeship?***

- Must be 18 years of age or older.
- Must live in the jurisdiction of the Apprentice and Journeyman Training Fund of Sheet Metal Workers Local #2.
- All applicants will be subject to an examination administered by Metropolitan Community College. The test will be over the following:
  - Numerical Skills / Reading Skills
  - Spatial Relations / Mechanical Ability

## ***What are some core academic concepts used in your trade?***

Basic math skills, reading skills, mechanical ability, and spatial relations (the ability to visualize a 3-dimensional object from a 2-dimensional pattern).

## ***Training Center Address:***

9703 East 53rd Street, Raytown, MO 64133

## ***Training Center Website:***

[www.sheetmetal2.org](http://www.sheetmetal2.org)



# Sprinkler Fitters

## ***What scope of work do those within your trade complete?***

Installing, inspecting, testing, and maintaining underground and overhead fire sprinkler systems. We work in industrial, commercial, and residential buildings.

## ***What are the physical requirements for those within your trade?***

Working on your feet throughout the day  
Climbing ladders  
Working at heights  
Carrying tools and materials

## ***What is the scope of training for a new apprentice in your trade?***

Apprentices are required to attend and complete our 5-year apprenticeship. 246 hours per year at our accredited training center plus on the job training.

We cover OSHA, use and care of tools, print reading, code, and backflow testing just to name a few courses.

Apprentices have the opportunity to receive numerous certifications to be ahead of the completion within our trade.

## ***What are the application requirements for a prospective apprenticeship?***

- 18 years or older
- High School Transcript
- Diploma or GED
- Birth Certificate
- DD214 (if applicable)

## ***What are some core academic concepts used in your trade?***

Basic Math  
Print Reading

## ***Training Center Address:***

8510 Hillcrest Road, Kansas City, MO 64138

## ***Training Center Website:***

New site under construction – [sprinklerfitters314.org](http://sprinklerfitters314.org)



# Teamsters

## ***What scope of work do those within your trade complete?***

Teamsters specialize in driving vehicles from ready-mix trucks, dump trucks, lowboy to name a few. We also have heavy haul companies that specialize in hauling cranes around the country to various job sites.

## ***What are the physical requirements for those within your trade?***

Ability to climb in and out of truck on regular basis, climb up and down ladder on truck, if applicable. Some manual labor may be required while truck is not being used.

## ***What is the scope of training for a new apprentice in your trade?***

We have a 3-year program. An apprentice starts off at 70% of the journeyman wage. Each year on your anniversary of entering the program, your wages increase 10% until you reach 100% of the journeyman scale. During your time as an apprentice, you may obtain your CDL (Class A or Class B), First-aid/CPR certification, NCCCO Boom Truck Certification, OSHA 10, OSHA 30, Signal and Rigging Certification, to name a few.

## ***What are the application requirements for a prospective apprenticeship?***

Apply in person by appointment or online at [www.teamsterslocal541.org](http://www.teamsterslocal541.org) and click on Apprenticeship tab. Email application to [rlewis@teamsterslocal541.org](mailto:rlewis@teamsterslocal541.org) or call 816-710-8990

## ***What are some core academic concepts used in your trade?***

Defensive driving  
Driving safely

## ***Training Center Address:***

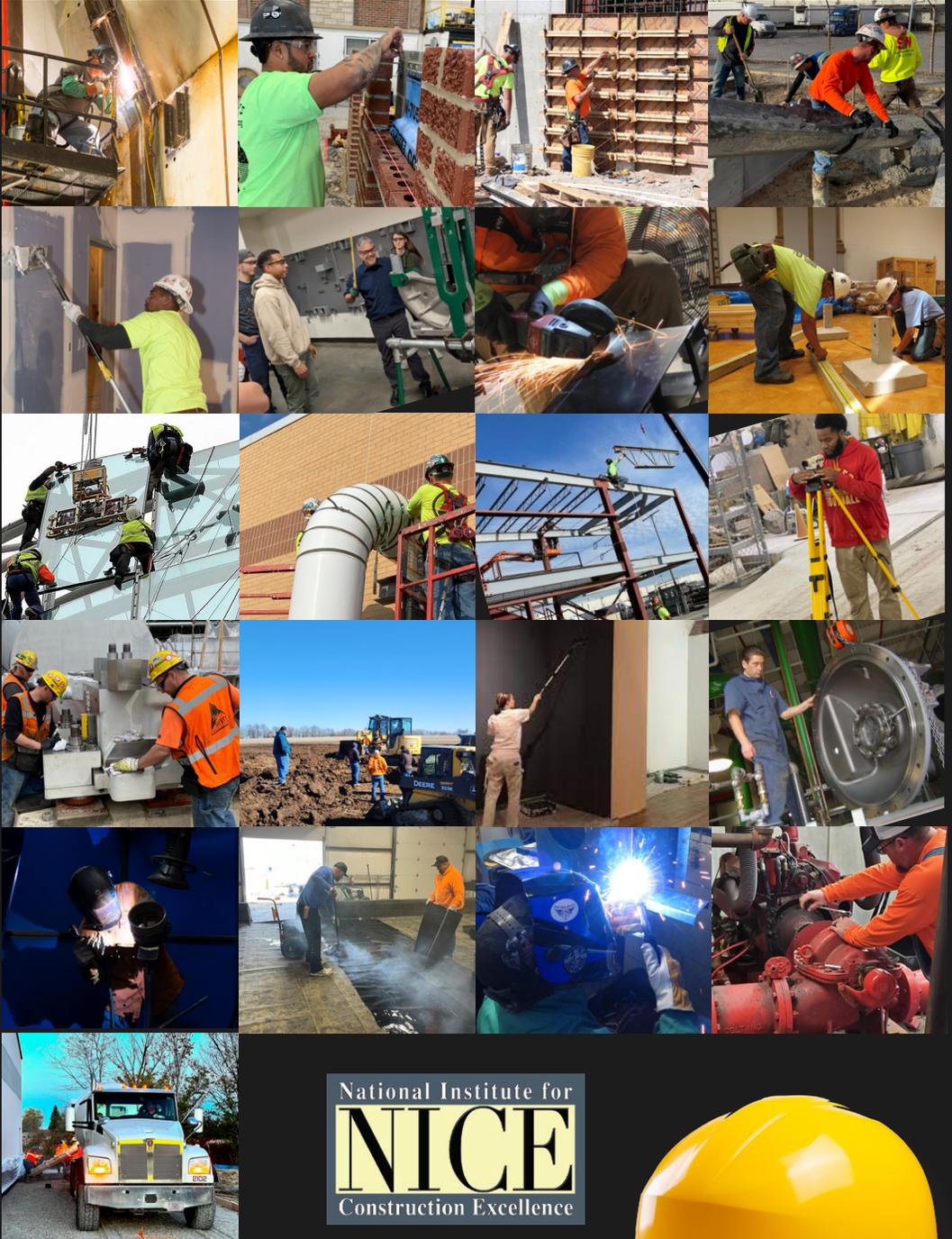
406 NW 1st Street, Oak Grove, MO 64075

## ***Training Center Website:***

[teamsterslocal541.org](http://teamsterslocal541.org)







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**We want to thank our trade partners for their great support and help to make this handbook possible.**

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