



NEXTTECH
ACADEMY®

PLUMBING CURRICULUM GUIDE

Shaping the future of our industry through flexible online training

Knowledge & Pacing

Our curriculum is intentional and prepares industry professionals. Most apprenticeship programs work on a 4-5-year model. NexTech Academy is designed to take a fraction of that time. We estimate that completion of the program will take 12-18 months.

NexTech Academy Scope and Sequence	
Months 1-4	By the end of Level 1, the student will be an educated helper , knowledgeable in tools, safety and materials.
Months 5-9	By the end of Level 2, the student will be an advanced helper to lead technicians. Depending on ability and comprehension, they may run basic maintenance calls.
Months 10-14	By the end of Level 3, the student will have experienced a variety of service calls expanding their knowledge base.
Months 14-18	By the end of Level 4, the student will have the knowledge, confidence and experience to troubleshoot and repair more advanced systems and, with their Nexstar training, they will be an outstanding ambassador for your company .

The Commitment

Each level is broken down into courses and each course consists of learning sessions, Session times vary, and hands-on skill assessments and reflection questions balance the time spent in front of the computer with in-person practice.

As the program progresses into the more technical / skill-based sections, Training Mentors and Training Leaders must closely monitor the student's comprehension of the skills being introduced. An experienced technician will have the ability to see if the student understands or does not understand the skill. Progression of the student from supervised to unsupervised skill practice is at the sole discretion of the Training Mentor and/or Training Leader.

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Plumbing Curriculum



Course Order and Descriptions

Level 1: Plumbing Fundamentals	
The History of Plumbing	You will gain understanding on how plumbing protects the health and wellness of the world.
The Big Picture	You will be introduced to the four key roles of a technician and you will get an overview of what it means to work for an ethical company.
Safety Awareness	You'll learn how to train your brain and your eyes to identify unsafe conditions. This course also covers regulations and safety standards.
Personal Safety	You'll learn the basics of personal protective equipment (PPE) and how to plan for safety.
Workspace Safety	You will spend time focusing on workplace procedures that will keep you safe from fire, falls, chemicals and injuring your hands and feet.
Driving Safety	This is review on safe and defensive driving skills. You still need to have a valid license to operate a company's vehicle.
Electrical Safety	Electrical safety knowledge can be the difference between life and death for you, your coworkers or the homeowners you serve.
Your Personal Health and Well Being	Examine your current behaviors that impact your health, as well as behaviors you might want to consider to improve your well-being.
Common Hand Tools	We'll introduce cutting and shaping tools, measurement and layout tools, tightening and loosening tools.
Common Measurement Tools	Almost everyone on earth has used a measuring tape or ruler at one point or another. Although they are common, they have many features that make them invaluable to a trades person.
Common Power Tools	You will become familiar with common power tools like drills, saws and others you will need to do your job.
Plumbing Specialty Tools	Specialized tools or single-purpose tools are effective because their purpose is focused on limited tasks
Electricity Basics	As a trades person, you'll need to have a basic understanding of electricity: both to perform job-related tasks and to stay safe.
Electrical Conductors	This content will help you understand the different types of wire and what they do when you are in homes.
Conductor Terminations For Plumbing	Termination points are the weakest link in any electrical circuit. Making quality terminations will ensure this link doesn't fail prematurely.
Volts, Amps, Watts and Ohms	Get to know the common concepts of electricity: volts, amps, watts and ohms!
Types of Electrical Circuits	Get a high-level overview of electrical circuits, how they work and what happens when there is a short circuit.
How To Read A Circuit Diagram	Understanding this will help you when installing equipment in a home.
Understanding Electrical Measurements	Discover what multimeters are, how to test AC and DC systems, how to test amp draw on a circuit and how to test continuity in a system or component.

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Additional Electrical Test Equipment	You primarily deal with water and sanitation, but technology and power tools operate on electricity.
Your Attitude	You are in control of your attitude and the choices you make. Awareness of your choices will help you have more control of your circumstances.
Mathematics Used In The Field	Being able to perform accurate measurements and calculations will save you time and effort and will help you complete tasks correctly and efficiently.
Drawings and Blueprint Reading	You will be introduced to construction drawings and blueprints and will learn what you want to look at in terms of your job's function.
Your Daily Habits	There are certain daily habits and mindsets that will greatly help you grow as a residential service technician.
An Introduction To Plumbing Materials	One of the keys to being a successful plumbing professional is knowing which pipes and fittings to use in various applications.
Plumbing Fittings and Valves	This course relays how fittings are used, how they are referred to, and general knowledge about their roles in plumbing.
Plastic Pipes	Plastic is an inexpensive option for plumbing a home and has many applications in DWV.
Copper Tubing	This course introduces copper tubing and their applications in the plumbing industry.
Cast Iron	Cast iron is typically found in older homes or possibly at the toilet drain. Learn more about its application in plumbing.
Steel Pipes	Like other materials, there are preferred uses, pros, and cons about the material and its usage.
Pipe Supports	This course covers the variety of support and hangers for the plumbing system in a home.
An Introduction To The Nexstar Service System	You will be introduced to the six steps of the Service System and you will complete reflection questions that will enhance your learning and better prepare you to work in the field with homeowners.
Plumbing Level 1 Test	Successfully completing this test will grant you access into the next level.
Level 2: Plumbing Basic Skills	
Residential Systems In The Home	This lesson introduces the different systems found in the home such as: drain, waste, vent, water distribution, and fuel gas.
Drains and Drain Cleaning Basics	Learn about drains in the home and the tools used to clean them.
Soldering	Homes built up to the early 21st century still have copper plumbing. Working with copper, it is important to understand soldering, which connects copper pipes and fittings together.
Piping Repairs and Alterations	Wear and tear from friction, running water, or accidental damage and puncture on pipes will require pipes to be repaired or altered.
Communication	Focus on how important non-verbal communication is on the job. You will also practice how to be a clear and effective communicator.

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Plumbing Fixtures	Plumbing fixtures only have two jobs, to deliver clean water and get rid of dirty water. With modern styles and technology, homeowners have more options than ever to suit their needs and lifestyles.
Lavatory Sink Area Repairs	Learn about the possibilities of providing options to customers when thinking about lavatory sinks.
Tub and Shower Area	This lesson introduces common tub and shower tasks.
Toilet Area Tasks	Identify the working parts and serviceable parts of a toilet.
Kitchen Sink Area	You will spend time on faucet installation, drain pipe installation, and the associated piping involved in their installation.
Appliance Related Tasks	This course introduces common appliances and how to service them.
Miscellaneous Plumbing Fixtures	This course is a repository for those fixtures that don't necessarily fall into other common categories in the house. Although you may not encounter or service these fixtures as a daily routine, they are still important to know.
Goal Setting	Big goals aren't impossible, you just need to approach them the right way. This course focuses on how to set measurable goals.
Sewage and Storm-water Pumps	This course introduces how pumps operate, types and styles, pits and their use, and installation practices as well as light troubleshooting.
Water Heater Installation and Replacement	This course teaches you how to identify each of the different types of water heaters and gives a high level view of how they work.
Service Partner Plans and System Checks	System checks and service partner plans protect customers, help develop loyalty and generate business during slower seasons. They are critical to the success of the company.
Preventative Maintenance Plans	A working knowledge of the process and what to look for to prevent unit and plumbing system failure.
Service System Preparation	You will focus on the behavior needed to minimize callbacks and to provide exceptional service.
Plumbing Level 2 Test	Successfully completing this test will grant you access into the next level.
Level 3: Intermediate Skills	
Troubleshooting: Getting Started	This is an overview of the troubleshooting process. Diagnosing a problem can save time and unnecessarily expensive repairs or replacements.
Faucet Repairs	You'll learn about seats, springs, stems, cartridges, o-rings, general faucet construction, etc.
Water Quality Solutions	Introduces the make-up of drinking water and what can be in it and the tools available to remedy common problems found in residential water quality settings.
Water Heater Troubleshooting and Repair	You will learn about how to troubleshoot and repair water heater parts.
Focus On The Greet Step	This lesson dives deep on creating a great first impression.
Plumbing Codes	This lesson introduces model codes and their effect on local codes.

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Structural Alterations	This lesson outlines best practices in making alterations to structural members.
Focus On The Explore Step	You will gain insight into the importance of keeping your eyes and ears open to what the customer truly wants and needs. Asking questions is key.
Residential System Installation	This lesson outlines best practices for installing the various systems in the home.
Focus On The Present Step	Explaining your solution and options in the customer's language will inspire their confidence in you.
Water System Protection	Introduces what cross connections and back-flows are, what they can do, and the devices available to prevent such things.
Focus On The Execute Step	You will focus on all of the things you can do to shine as a craftsman and demonstrate your respect for the customer and their home.
Fuel Gas Systems	This lesson introduces fuel gas systems used in residential systems.
Focus On The Wrap Up Step	You will focus on how to making sure the customer is satisfied with the work done, following up after the call and critiquing your performance.
Advanced Drain Cleaning	Learn about large and small jettors and their components and attachments.
An Introduction To Sewer Repair and Replacement Calls	You will get a high-level view of how to speak with customers about sewer repair and replacement. Various issues will be broken down and you will get the chance to role play these types of calls.
Leak Detection	This course introduces the common methods of leak detection used in the plumbing industry today.
Plumbing Level 3 Test	Successfully completing this test will grant you access into the next level.
Level 4: Advanced Skills and Customer Interactions	
Private Water and Well Systems	You will learn about private wells, their components, and how they may be serviced.
Working With People	Knowing and understanding what makes people tick will increase your ability to relate to customers and provide a better service experience.
Recirculation Systems	This course introduces the system, why it's used, the parts that make a circulation system work and how it can malfunction.
Dealing With Pushbacks	Learn about being proactive or reactive in responding to objections.
Water Pressure Boosters	This is an informational course about water pressure boosters and niche plumbing services.
Boilers and Domestic Hot Water System	Learn the major parts of the system and how they work together to make hot water.
Solar Heating Systems	This lesson introduces solar water heating systems how they resemble boiler systems.
Challenging Customer Situations	This course focuses on interesting and challenging situations you may come across in the field.
Private Waste Disposal Systems	This informational course teaches about the different systems used to take care of the waste removal needs of customers with no access to municipal systems.

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Lift Stations	The overview of lift stations, what they are, how they work, and why they are important to some homes.
System Sizing	This lesson is a deep dive into all the factors that affect the sizing of DWV, Storm, Water, and Fuel Gas Systems.
Maximizing Efficiency: Help On The Job	You will spend time reviewing time cards, your summary of finding sheet and your personal resources, such as the call center and your dispatcher.
Water Heater Retrofits	This course gives an overview of the determining factors that must be considered when upgrading a customer from a tank type to a tankless water heating system.
Repipes	This is an introduction to the circumstances that may lead to re-piping drain and water system components.
Remodels	The objective is to introduce students to remodels and some of the reasons a company might fall into them.
Commercial Plumbing	This course introduces the fixtures and systems found in commercial applications.
Build Your Future	You will review some key customer service concepts taught in NexTech Academy and provide you with ideas on how you can keep your learning going and build mentoring relationships with your colleagues.
Plumbing Level 4 Test	Successfully completing this test will grant you graduation from NexTech Academy!