



# NYS & CSEA Applied Skilled Trades Program

FOR CSEA-REPRESENTED NYS EMPLOYEES

**Build in-demand job skills, pursue your interests,  
and advance your career at no cost!\***

*\*No Cost to NYS Agencies and Employees*

**Carpenter | Electrician | Mason & Plasterer | Plumber & Steamfitter**

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# Applied Skilled Trades Program Overview



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## NYS & CSEA Applied Skilled Trades Program

## Introduction

The NYS & CSEA Applied Skilled Trades Program (ASTP) provides CSEA-represented NYS employees with two years of trade theory instruction. This instruction meets the relevant coursework component of the minimum qualifications for appointment to four non-competitive journey-level positions: carpenter, electrician, mason and plasterer, and plumber and steamfitter. The ASTP provides agencies with the means to develop a more highly-skilled workforce and creates a larger pool of qualified candidates for future journey-level vacancies. Additionally, a greater number of operations and maintenance employees will have the opportunity to receive skill development training and increase their promotional opportunities.

## Participant Eligibility

Participants in the ASTP must meet the following minimum qualifications:

- Be 18 years of age or older.
- Possess a high school diploma or a high school equivalency (GED).
- Be a full-time CSEA-represented NYS employee (SG-12 or below) with at least one year of service.

Participants are required to maintain a cumulative grade average of "C" (70% - 79%) to remain in the ASTP.

# Training Opportunities



## Applied Skilled Trades Traineeship

- The two-year Applied Skilled Trades Traineeship (Traineeship) provides training and experience commensurate with the nature and job responsibilities of public sector trade positions, expedites the time required for employees to reach journey-level status, and increases the state's ability to "grow its own."
- Agencies are required to dedicate a vacant non-competitive trade-title line item that will be used for appointment to the Traineeship. Employees typically enter the Traineeship at the SG-9 level and, upon successful completion, are appointed permanently to the SG-12 journey level.
- The Traineeship requires employees to complete at least 144 hours of trade theory instruction and 2,000 hours of on-the-job training annually. Trade-specific course requirements and on-the-job training tasks are based on the apprenticeship model and New York State classification standards of journey-level job titles. NOTE: Agencies are responsible for providing and monitoring the required on-the-job training.

## Applied Skilled Trades Certificate Program

- The two-year Applied Skilled Trades Certificate Program (Certificate Program) provides agencies with the means to develop a more highly-skilled workforce and creates a larger pool of qualified candidates for future journey-level vacancies. Additionally, a greater number of operations and maintenance employees will have the opportunity to receive skills development training and increase their promotional opportunities.
- The Certificate Program provides operations and maintenance employees with the same trade theory courses as those in the Traineeship. Agencies may provide employees with the necessary on-the-job training required for future appointment to a non-competitive trade title.
- Unlike the Traineeship, participation in the Certificate Program does not require an agency to dedicate a journey-level line item as a precondition to participation. Successful completion of the coursework does not guarantee an appointment to a journey-level position but does meet the educational minimum qualifications for appointment to SG-12 journey-level positions.

# How to Apply & Important Deadlines

## Application Process

The NYS & CSEA Partnership will release the Worksite Survey and Agency Summary Forms in **May 2025**. Agency Directors of Human Resources will distribute survey forms to their facilities at that time. NYS agencies and facilities interested in participating in the 2026-2028 ASTP must complete the Worksite Survey Form and return it to their Agency Director of Human Resources (central office) by June 30, 2025. Agencies are required to return the Worksite Survey Form and the Agency Summary Form to the Partnership by July 18, 2025.

## Selection Process

After the Partnership approves an agency's or facility's request to participate in the program, the agency or facility begins a formal recruitment and selection process which includes a job posting (Traineeship only), an application form from the employee that details their education and experience, and an oral interview conducted by management and CSEA representatives.

For a Certificate Program, when the number of applicants exceeds the maximum number of training seats available, the same selection process is followed.

For both the Traineeship and Certificate Program, agencies are required to verify that applicants meet the eligibility requirements covered under the *Participant Eligibility section on page 1*. The Partnership will provide agencies with employee applications, interview questions, scoring criteria, and applicant scoring sheets, as needed.

## No Cost to Agencies & Employees

The ASTP, including textbooks and instruction, is available at no cost to agencies and participating employees. Participation in the ASTP requires management and CSEA representatives to work cooperatively to provide participating employees with the support, supervision, and release time (**without charge to leave accruals**) required to successfully complete the two-year program. All coursework is held during regular work hours (9:00am-4:30pm).



# Required Coursework



All participants in the ASTP are required to complete the following coursework:

## Refresher Course

- Math Fundamentals (15 hours)

## Core Courses

- Technical Math (45 hours)
- Blueprint Reading Fundamentals (15 hours)
- Workplace Communications (45 hours)

## Trade-Specific Courses

- Four courses (72 hours each)

All participants in the ASTP are required to complete the refresher, core, and trade-specific courses described below. These courses have been designed to provide the foundational skills necessary to succeed in the specialized trade courses.

## Refresher Course

### Math Fundamentals (15 hours)

This course introduces participants to the fundamental mathematical functions of addition, subtraction, multiplication, and division of whole

numbers. It will also introduce concepts involving whole numbers, with heavy emphasis placed on elementary fractions, decimals, and percents. The course will help prepare participants for the Technical Math core course (see next section).

## Core Courses

### Technical Math (45 hours)

This course provides a thorough review of the math principles needed for participants to successfully complete the trade theory instruction required for technical occupations. It focuses on the use of whole numbers, fractions, decimals, and percents to solve practical word problems as they relate to various trades. The course progresses to using and interpreting graphs, as well as applying the concepts of plane and solid geometry, algebra, and trigonometry to solving practical word problems.

### Blueprint Reading Fundamentals (15 hours)

This course gives participants the fundamental skills necessary to read and interpret blueprints and schematic drawings. Participants will use an architectural ruler to read scaled drawings, convert designs into a blueprint, comprehend basic abbreviations, symbols, and line types within a blueprint, and interpret different types of drawings (for example, architectural, electrical, plumbing, or landscaping).

### Workplace Communications (45 hours)

This course provides a practical introduction to effective oral and written communication for employees working in trade occupations. The two-way nature of communication, including verbal and non-verbal expression, will be addressed. Techniques for successfully communicating with and relating to others in the workplace are an essential ingredient of the course. Emphasis will be placed on basic writing skills, including principles of grammar and sentence structure in preparing memos, letters, and simple reports.

# Carpenter Trade Courses



## **Carpentry 1: Tools and Materials (72 hours)**

This course introduces the theory and practice of carpentry, with a focus on tools and materials. Topics include wood products; engineered wood products; fasteners; hand tools; stationary power tools; scaffolding and worksite safety; material calculations; and basic building codes.

## **Carpentry 2: Light Framing (72 hours)**

This course covers the theory and practice of carpentry, with a focus on residential light frame construction. Topics include print reading; safety factors; material calculations; floor framing systems; wall framing; ceiling framing; roof framing; roof sheathing; roof finishes; window installation; and exterior door installation.

## **Carpentry 3: Interior (72 hours)**

This course covers the theory and practice of carpentry with a focus on interior finish and trim.

Topics include partition layout; insulation and ventilation; drywall installation; wall paneling and wall tile; suspended ceilings; interior door installation; interior trim; stair framing and finishing; and cabinets and countertops.

## **Carpentry 4: Special Projects (72 hours)**

This course applies and builds upon skills learned in the three previous carpentry courses. Topics and projects include project planning; changing interior partitions; changing closets and shelves; institutional furniture repair; table tops and laminates; installing wall products; storage buildings and shed roofs; outdoor benches and tables; and porches and steps.

**NOTE:** Each course listed above is expected to be completed over a 12-week period (6 hours per week). Course instruction is supplemented with hands-on activities that support the concepts learned in the classroom.

# Electrician Trade Courses



## Electricity 1: Direct Current Electricity (72 hours)

This course introduces the basic concepts of direct current electricity. Topics include how electricity works; measuring electrical quantities; reading electrical prints; resistance and conductivity; Ohm's Law; series and parallel circuits; combination circuits; switches; batteries; capacitors; and inductors.

## Electricity 2: Alternating Current Electricity (72 hours)

This course covers the basic concepts of alternating current electricity. Topics include the differences between DC and AC circuits; the AC sine wave; using vectors to solve AC problems; calculating impedance in circuits having inductance, capacitance, and resistance; AC power relationships in single-phase and three-phase circuits; and principles of transformer operation and maintenance.

## Electricity 3: Electrical Installation (72 hours)

This course provides participants with the principles and practices of installing electrical circuits in

commercial buildings. Topics include electrical safety and codes; print reading; load computation and layout; branch circuit installation; switches and receptacles; motor and appliance circuits; feeder circuits, panel boards, and lighting circuits; and the electrical service entrance.

## Electricity 4: Electrical Systems and Motors (72 hours)

This course covers the design, installation, troubleshooting, and repair of electric motors. Topics include motors and print reading; split phase motors; capacitor motors; repulsion motors; universal and special motors; synchros and servos; motor installation and maintenance; motor starters, switches, and controls; and motor relays.

**NOTE:** Each course listed above is expected to be completed over a 12-week period (6 hours per week). Course instruction is supplemented with hands-on activities that support the concepts learned in the classroom.



# Mason & Plasterer Trade Courses



## Masonry 1: Concrete Flat Work (72 hours)

This course introduces the theory and practice of creating and maintaining horizontal concrete structures such as walks and slabs. Topics include concrete measurements and calculations; safety factors; properties of concrete; foundation design; concrete forms; concrete placement; and concrete finishing and curing.

## Masonry 2: Block Work (72 hours)

This course provides the theory and practice of maintaining block walls using concrete (cement) blocks and bricks. Topics include block measures and calculations; print reading; safety factors; block wall construction; block wall repair and maintenance; bricklaying; and brick wall maintenance and repair.

## Masonry 3: Tile and Gypsum Products (72 hours)

This course covers the theory and practice of maintaining and repairing structures such as tile floors and walls, drywall and plaster walls, and ceilings. Topics include product measures and calculations;

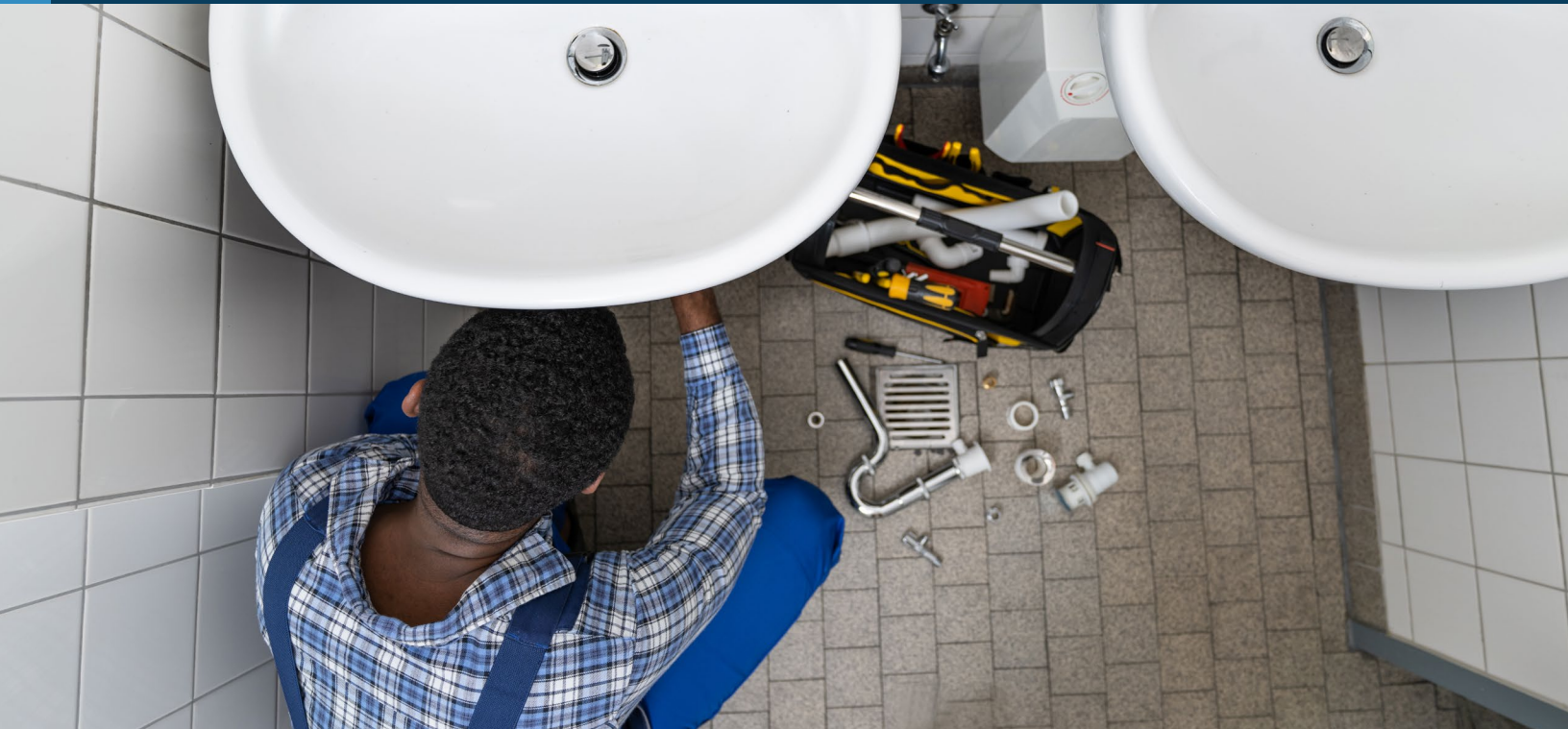
safety issues; and the installation, maintenance, and repair of ceramic tile, soft tile, marble, terrazzo, cultured stone, drywall, lath, and plaster.

## Masonry 4: Special Projects (72 hours)

This course covers the theory and practice of maintaining special masonry structures such as pavers and stone walkways, retaining walls, brick and stone veneer walls, and glass block walls. Also included are topics in material measurements and job estimates, and safety issues related to the job site.

**NOTE:** Each course listed above is expected to be completed over a 12-week period (6 hours per week). Course instruction is supplemented with hands-on activities that support the concepts learned in the classroom.

# Plumber & Steamfitter Trade Courses



## Plumbing Systems 1: Waste, Vent, and Drain (72 hours)

This course introduces the installation and maintenance of piping systems in office buildings. Topics include sanitary drainage and venting; storm drainage piping; plastic pipe and fittings; cast soil pipe; the plumbing trap; testing drainage systems; and installation measurements and calculations.

## Plumbing Systems 2: Water Supply (72 hours)

This course focuses on the installation and maintenance of piping systems in office buildings. Topics include copper pipe and fittings; sizing water supply piping; testing water supply piping; fixtures; valves; faucets; water heaters; pressure boosters; re-circulating systems; fixture and appliance repair; water testing; and print reading and calculations.

## Plumbing Systems 3: Installation (72 hours)

This course covers the installation and maintenance of piping systems in office, residential, or other non-

manufacturing-type buildings. The special focus of the course is on the piping system, as opposed to individual fixtures and components. Classroom instruction is devoted to system design and system troubleshooting, along with sessions devoted to estimating and to plumbing codes.

## Plumbing Systems 4: Pipefitting and Welding (72 hours)

This course demonstrates the techniques used to permanently join pipes used in plumbing and related systems. Also included are units on basic welding skills as they apply to pipefitting. Topics include oxy-acetylene cutting; pipe threading and joining; arc and shielded metal arc welding (SMAW); SMAW groove welds; SMAW open v-groove welds; SMAW open root pipe welds; joint fit-up and alignment; and welding safety.

**NOTE:** Each course listed above is expected to be completed over a 12-week period (6 hours per week). Course instruction is supplemented with hands-on activities that support the concepts learned in the classroom.



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