NYS & CSEA Partnership for Education and Training

No cost to NYS agencies & employees*

* For duration of 2003-07 contract period

Attention: NYS Agency/Facility Human Resources Directors, Plant Managers, and CSEA Local Presidents

NYS & CSEA Applied Skilled Trades Traineeship & Certificate Program

Announcing a new two-year training and development program that provides CSEA-represented NYS employees with focused, up-to-date classroom training for the following skilled trades:

- Carpenter
- Electrician
- Mason and Plasterer
- Plumber and Steamfitter
- Refrigeration Mechanic

NOTE: Agencies provide on-the-job training.

Agencies may also select among course work in the above trades to qualify CSEA-represented employees for General Mechanic. See page 11 for more details.

Applications must be returned to agency Directors of Human Resources by Oct. 14, 2005

Core courses scheduled to begin February 2006

Trade-specific courses scheduled to begin September 2006

www.nyscseapartnership.org

Applied Skilled Trades Traineeship and Certificate Program

Table of Contents

Applied Skilled Trades Traineeship and Certificate Program

Background

During the 2003-07 collective bargaining negotiations, the State and CSEA agreed to re-examine the three-year Apprenticeship Program and explore alternative approaches to qualify CSEA-represented NYS employees for skilled trades positions in five non-competitive journey-level titles -- Carpenter; Electrician; Mason and Plasterer; Plumber and Steamfitter; and Refrigeration Mechanic. After research and discussion, two new skilled trades training opportunities have been established:

1. Applied Skilled Trades Traineeship

- A two-year Applied Skilled Trades Traineeship (Traineeship) replaces the Apprenticeship Program. The Traineeship will provide training and experience more commensurate with the nature and job responsibilities of public sector trade positions, expedite the time required for employees to reach journey-level status, and increase the state's ability to "grow its own."
- The Traineeship is modeled after the Apprenticeship Program and 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 classification standards of journey-level job titles. NOTE: Agencies are now responsible for providing and monitoring the required on-the-job training.
- Agencies are required to dedicate a vacant journey-level line item that will be used for appointment to the Traineeship for the trade title. Trainees typically enter the Traineeship at the SG-9 level and, upon successful completion, will be appointed permanently to the SG-12 journey level.

2. 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 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.
- The Certificate Program provides operations and maintenance employees with the same trade theory courses as that 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 course work 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. A certificate will be issued to those employees who successfully complete a two-year program in a trade.

Trade-Specific, Core, and Safety and Health Courses

All participants in the Traineeship and Certificate Program are required to complete four trade-specific courses totalling 72 hours each. Prior to beginning trade-specific courses, participants are required to complete three core courses : Technical Math (45 hrs.), Blueprint Reading/Schematics (15 hrs.), and Technical Communications (45 hrs.). Participants are required to maintain a "C" average to remain in the Traineeship or Certificate Program. Participants may also elect to complete either or both of the Occupational Safety and Health Administration (OSHA) courses described on page 5. While General Mechanic is not a part of the Traineeship or Certificate Program, agencies may select among trade-specific course work to qualify employees for General Mechanic.

Eligibility

Participants in both programs must meet the following minimum qualifications: 1) 18 years of age or older; 2) possess a high school diploma or a general equivalency diploma (GED) recognized by the State Education Department; 3) proficient in English and math; and, 4) a full-time CSEA-represented NYS employee (Operational Services Unit) at SG-12 or below, with at least one year of State service.

How to Apply

Interested NYS agencies/facilities and CSEA locals must complete a joint application (see page 12) verifying the number of employees approved, by trade category, to participate in the Traineeship and/or Certificate Program. Completed applications must be returned to central office agency Directors of Human Resources by October 14, 2005. Agencies are required to summarize applications and forward them to the Partnership by October 21, 2005.

Selection

After the Partnership approves a request to participate in a Traineeship, the agency begins a formal recruitment and selection process which includes a job posting (Traineeship only), an application form from the individual which details education and experience, and an oral interview conducted by agency 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. The Partnership will provide NYS agencies/facilities and CSEA locals with employee applications, interview questions, scoring criteria, and applicant scoring sheets, as needed. For an advance copy of these materials, contact the Partnership.

Cost to Agencies and/or Employees

Both the Traineeship and Certificate Program, including textbooks and instruction, is available at no cost to agencies or participating employees for the duration of the 2003-07 collective bargaining agreement. Agencies and employees are required to commit to release time to attend both trade theory and core course work, which is held during regular work hours.

Timeline for Implementation of Traineeships and Certificate Programs

- June 27, 2005: NYS Dept. of Civil Service and Partnership held informational meeting with NYS central office agencies who have trades titles.
- August 25, 2005: Partnership issues program informational materials and applications to NYS agencies and CSEA Local Presidents to distribute within central office and among its facilities.
- October 14, 2005: Deadline for facilities to return applications to NYS agencies' central office.
- October 21, 2005: Deadline for NYS agency central offices to return facility applications and agency summary sheets to Partnership.
- November 25, 2005: Partnership reviews number and locations of requested traineeships and certificate programs and determines availability of instructors and training sites.
- December 2, 2005: Partnership makes final decisions regarding specific trades and locations of traineeships and certificate programs based on minimum participant levels and notifies agencies/facilities. Where applicable, agencies/facilities initiate selection process among interested employees.
- January 5, 2006: Deadline for agencies/facilities to submit to the Partnership a list of employees selected to participate in traineeships and/or certificate programs and those requesting core course waivers (if applicable).
- January 19, 2006: Deadline for Partnership to approve or not approve requests for course waivers.
- Feb. 6 – April 7, 2006: Technical Math (45 hrs.) and Blueprint/Reading Schematics (15 hrs.) core courses are held.
- April 17 – June 9, 2006: Technical Communications (45 hrs.) core courses are held.
- Sept. 11 – Dec. 1, 2006: First trade-specific courses (72 hrs.) are held.
- Jan. 8 – March 30, 2007: Second trade-specific courses (72 hrs.) are held.
- April 2 – June 22, 2007: Third trade-specific courses (72 hrs.) are held.
- Sept. 17 – Dec. 7, 2007: Fourth trade-specific courses (72 hrs.) are held.
- February 6, 2008: Applied Skilled Trades program concludes.

NOTE: The above timeline is subject to change in order to accommodate the availability of qualified instructors and training sites.

Core Courses
(To be completed for all trades)

All participants in the Traineeship and Certificate Program are required to complete the core courses described below. These courses have been designed to provide the foundational skills necessary to succeed in the specialized trade courses.

Blueprint Reading/Schematics (15 hrs.): This course will give participants the fundamental skills necessary to read and interpret blueprints and schematic drawings. Participants will learn to 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 (e.g., architectural, electrical, plumbing, HVAC, landscaping).

Technical Communications (45 hrs.): This course provides a practical introduction to effective oral and written communication for CSEA-represented NYS 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 given to writing basics, including principles of grammar and sentence structure, in the preparation of memos, letters, and simple reports. The use of technology in the communication process will be included.

Technical Math (45 hrs.): This course is designed to provide a solid review of the math principles needed for CSEA-represented employees to be successful in pursuing the trade theory instruction required for technical occupations. It focuses on the use of whole numbers, fractions, decimals, and percents to solve practical word/story problems as they relate to various trades. The course progresses on to using and interpreting graphs as well as solving practical word/story problems by applying the concepts of plane and solid geometry, algebra, and trigonometry.

Course Waivers: Any core course may be waived upon providing evidence of completing equivalent training during the previous five years and achieving a minimum score of 85% on the competency exam for the course.

Safety and Health Courses (Optional)

All participants in the Traineeship and Certificate Program may elect to complete either or both of the safety and health courses described below. These courses have been designed to emphasize the regulations for the most hazardous workplace conditions, using Occupational Safety and Health Administration (OSHA) standards as a guide.

Occupational Safety and Health Standards for the Construction Industry (10 hrs.): This course covers OSHA policies, procedures, and standards, as well as construction safety and health principles. Topics include: introduction to OSHA; the OSH Act; general safety and health provisions; recordkeeping; fall protection; personal protective and life saving equipment; materials handling, storage, usage and disposal; tools – hand and powered; scaffolds; cranes, derricks, hoists, elevators and conveyors; excavations; and stairways and ladders.

Occupational Safety and Health Standards for General Industry (10 hrs.): This course covers OSHA policies, procedures, and standards, as well as general industry safety and health principles. Topics include: introduction to OSHA; the OSH Act; general safety and health provisions; walking and working surfaces; exit routes; emergency action plans; fire prevention plans and fire protection; electrical; flammable and combustible liquids; personal protective and life saving equipment; machine guarding; hazard communication; introduction to industrial hygiene/bloodborne pathogens and/or ergonomics; safety and health programs.

Two-year Course Sequence for CARPENTER Track

Year One

Term One
Carpentry, Tools, and Materials (72 hrs.)

Term Two
Carpentry, Light Frame (72 hrs.)

Year Two

Term One
Carpentry, Interior (72 hrs.)

Term Two
Carpentry, Special Projects (72 hrs.)

Course Descriptions

Carpentry, Tools, and Materials: This course introduces the theory and practice of carpentry with a focus on tools and materials. Topics will include wood products; engineered wood products; fasteners; hand tools; stationary power tools; scaffolding and work site safety; material calculations; and basic building codes. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Carpentry, Light Frame: This course covers the theory and practice of carpentry with a focus on residential light frame construction. Topics will 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Carpentry, Interior: This course covers the theory and practice of carpentry with a focus on interior and trim. Topics will 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Carpentry, Special Projects: This course applies and builds upon skills learned in the three previous carpentry courses. The classroom instruction is supplemented by hands-on activities in a laboratory or actual work situation which support the concepts learned in the classroom. Topics and projects will 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).

Two-year Course Sequence for ELECTRICIAN Track

Year One

Term One
Direct Current Electricity (72 hrs.)

Term Two
Alternating Current Electricity (72 hrs.)

Year Two

Term One
Electrical Installation (72 hrs.)

Term Two
Electric Motors (72 hrs.)

Course Descriptions

Direct Current Electricity: 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Alternating Current Electricity: 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Electrical Installation: This course is designed to provide participants with the principles and practices of installing electrical circuits in commercial buildings. Topics will 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Electric Motors: This course covers the design, installation, troubleshooting, and repair of electric motors. Topics will 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

NOTE: Each course listed above is expected to be completed over a 12-week period (6 hours per week).

Two-year Course Sequence for MASON AND PLASTERER Track

Year One

Term One
Concrete Flat Work (72 hrs.)

Term Two
Masonry, Block Work (72 hrs.)

Year Two

Term One
Masonry, Tile, and Gypsum Products (72 hrs.)

Term Two
Masonry, Special Projects (72 hrs.)

Course Descriptions

Concrete Flat Work: 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Masonry, Block Work: This course provides the theory and practice of maintaining block walls using concrete (cement) blocks and bricks. Topics will include block measures and calculations; print-reading; safety factors; block wall construction; block wall repair and maintenance; bricklaying; and brick wall maintenance and repair. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Masonry, Tile, and Gypsum Products: This course covers the theory and practice of maintaining and repairing structures such as tile floors and walls, and drywall and plaster walls and ceilings. Topics will 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Masonry, Special Projects: 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

NOTE: Each course listed above is expected to be completed over a 12-week period (6 hours per week).

Two-year Course Sequence for PLUMBER AND STEAMFITTER Track

Year One

Term One
Plumbing Systems, Waste, Vent, and Drain (72 hrs.)

Term Two
Plumbing Systems, Water Supply (72 hrs.)

Year Two

Term One
Welding and Pipefitting (72 hrs.)

Term Two
Steamfitting (72 hrs.)

Course Descriptions

Plumbing Systems, Waste, Vent, and Drain: This course introduces the installation and maintenance of piping systems in office buildings. Topics will 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Plumbing Systems, Water Supply: This course covers the installation and maintenance of piping systems in office buildings. The special focus of the course is on water supply and related fixtures and equipment. Topics will 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. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Welding and Pipefitting: This course deals with 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 groove welds; smaw open v groove welds; smaw open root pipe welds; joint fit-up and alignment; and welding safety. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Steamfitting: This course covers the techniques used to permanently join pipes used in hot water, steam and related systems. Topics include steam traps; hydronic equipment; hot tapping; hydronic valves and maintenance; hydronic system testing; hydronic heating and cooling systems; and commercial refrigeration systems. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

NOTE: Each course listed above is expected to be completed over a 12-week period (6 hours per week).

Two-year Course Sequence for REFRIGERATION MECHANIC Track

Year One

Term One
Fundamentals of Refrigeration (72 hrs.)

Term Two
Air Conditioning (72 hrs.)

Year Two

Term One
Commercial Refrigeration (72 hrs.)

Term Two
Electric Motors (72 hrs.)

Course Descriptions

Fundamentals of Refrigeration: This course covers the installation, maintenance, and repair of refrigeration systems and devices in office buildings. Topics will include the refrigeration cycle; properties of air and gas; tools and test instruments; refrigerants; filters and driers; system testing; compressor maintenance; measurements and calculations; and safety factors. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Air Conditioning: This course deals with the installation and maintenance of air conditioning units and systems in office buildings with an emphasis on different compressors and on system maintenance. Topics will include reciprocating compressors; rotary, helical and scroll compressors; centrifugal compressors; compressor motors and controls; compressor maintenance and repair; evaporator maintenance and troubleshooting; condensers and cooling towers; condenser troubleshooting; and related print-reading and calculations. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Commercial Refrigeration: This course covers the maintenance of commercial cooling systems found in office buildings. Instruction is directed at various cooling systems and devices found in buildings including water coolers; ice making machines; cold storage units; walk-in coolers; absorption chillers; fans and fan motors; air filtration and ductwork; troubleshooting systems and controls; and related print-reading and calculations. Instruction is supplemented with hands-on activities in a laboratory which support the concepts learned in the classroom.

Electric Motors: This course covers the design, installation, troubleshooting, and repair of electric motors associated with air conditioning systems. Topics will 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. Instruction is supplemented by hands-on activities in a laboratory which support the concepts learned in the classroom.

NOTE: Each course listed above is expected to be completed over a 12-week period (6 hours per week).

GENERAL MECHANIC Courses

General Mechanics have unique training needs that vary depending on their background and experience, and agency work assigments. Therefore, the Partnership is offering a menu of trade-specific courses that agencies can use to build custom training plans for General Mechanics. The Partnership will issue completion certificates for individual courses. The following guidelines have been established for using the trade-specific tracks for General Mechanic:

- Courses in the Electrician track are not to be used for General Mechanic. They are reserved for participants in the Electrician Traineeship or Certificate Program who will take all four courses in the order presented. If there is a need for participants to take an Electricity Basics (one-day) and/or an Electricity Advanced (two-day) course, please contact the Partnership to discuss.

- Three courses in the Carpenter track can be used for General Mechanic: Carpentry, Tools, and Materials; Carpentry, Light Frame; and Carpentry Interior. However, the Carpentry, Tools, and Materials course must be taken first, as a pre-requisite, to either of the other two.

- All four courses in the Mason and Plasterer track can be used for General Mechanic. The courses can be taken individually or combined in any order.

- Two courses in the Plumber and Steamfitter track can be used for General Mechanic: Plumbing Systems, Waste, Vent, and Drain; and Plumbing Systems, Water Supply. The courses can be taken individually or combined in any order.

- Two courses in the Refrigeration Mechanic track can be used for General Mechanic: Fundamentals of Refrigeration; and Air Conditioning. The Fundamentals of Refrigeration course is a pre-requisite to the Air Conditioning course.

NOTE: Information provided under the Eligibility, How to Apply, Selection, and Cost to Agencies and/or Employees sections on page 2 apply to General Mechanic courses also.

Applications must be returned to agency Directors of Human Resources by Oct. 14, 2005

NYS & CSEA Partnership for Education and Training

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NYS & CSEA Applied Skilled Trades Traineeship and Certificate Program Application

(Please type or print)

To arrange for an *Applied Skilled Trades Traineeship* and/or *Certificate Program* at your facility, complete this application and mail or fax it to your central office agency's Department of Human Resources.

Agency Name: _____

Facility Name: _____

CSEA Local #: _____

County where facility is located: _____

Please specify the number of employees you have approved to participate in the Traineeship and/or Certificate Program according to the following skilled trades:

Traineeship*

Carpenter	_____
Electrician	_____
Mason and Plasterer	_____
Plumber and Steamfitter	_____
Refrigeration Mechanic	_____

* Requires dedication of a line item.

Certificate Program

Carpenter	_____
Electrician	_____
Mason and Plasterer	_____
Plumber and Steamfitter	_____
Refrigeration Mechanic	_____

General Mechanic _____

Please see page 11 for more details.

Labor-Management Contact Information

By submission of this application, the NYS agency/facility and CSEA Local agree to work cooperatively to provide employees accepted into the Applied Skilled Trades Traineeship and/or Certificate Program with the support and supervision necessary to successfully complete the program's requirements.

Director of Human Resources (or equivalent):

Name: _____

Job Title: _____

Address: _____

_____

Phone: _____

E-mail: _____

Signature: _____

Date: _____

CSEA Local President:

Name: _____

CSEA Local #: _____

Address: _____

_____

Phone: _____

E-mail: _____

Signature: _____

Date: _____

Additional Operations and Maintenance courses available to CSEA-represented NYS employees

The one and two-day skilled trades courses listed below are available to CSEA-represented NYS employees either as a result of a mutual request from worksite labor and management representatives (worksite request) and/or through a published course schedule where individual employees select courses (open enrollment).

The courses are designed to help the State's operations and maintenance employees improve their current skills and learn new ones by providing hands-on, practical instruction that reflect the every day challenges employees encounter in the workplace.

- Air-Conditioning and Refrigeration Basics – 1 Day
- Blueprint Reading/Schematics – 1 Day
- Carpentry Basics – 1 Day
- Carpentry Advanced – 2 Days
- Electricity Basics – 1 Day
- Electricity Advanced – 2 Days
- Masonry and Plastering Basics – 1 Day
- Plumbing Basics – 1 Day
- Plumbing Advanced – 2 Days
- Small Engine Basics – 1 Days
- Welding Basics – 1 Day

For more information on how to bring a course to your worksite, contact the Partnership for a copy of the *Resources* publication. *Resources* can also be downloaded from the Partnership's web site at www.nyscseapartnership.org.

To find out what courses are coming to your area, contact the Partnership for a copy of the *Skills for Success* publication. *Skills for Success* can also be downloaded from the Partnership's web site at www.nyscseapartnership.org.

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