

NYS & CSEA Applied Skilled Trades Program

All participants in the Applied Skilled Trades Program (Traineeship and Certificate Program) are required to complete the refresher and core 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 - 12 hours

This course introduces participants to the fundamental mathematical functions of addition, subtraction, multiplication, and division of whole numbers. It also introduces concepts involving whole numbers with heavy emphasis placed on elementary fractions, decimals, and percents. The course helps prepare participants for the *Technical Math* core course.

Required Core Courses

Technical Math - 45 hours

This course provides a thorough review of the math principles needed for employees 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 and story 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 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 (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 is placed on basic writing skills, including principles of grammar and sentence structure in the preparation of memos, letters, and simple reports.

MASON AND PLASTERER (Two-Year Track)

Masonry: 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. Instruction is supplemented with hands-on activities in a laboratory that support the concepts learned in the classroom.

Masonry: 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. Instruction is supplemented with hands-on activities in a laboratory that support the concepts learned in the classroom.

Masonry: 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. Instruction is supplemented with hands-on activities in a laboratory that support the concepts learned in the classroom.

Masonry: 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. Instruction is supplemented with hands-on activities in a laboratory that support the concepts learned in the classroom.