

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.

CARPENTER (Two-Year Track)

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

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

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

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