# ROOFER APPRENTICE (RFA)

**RFA 110 Introduction to Roofing Systems and Safety (6 Credits)**
RFA
This course provides apprentices with foundational knowledge of the roofing industry, including an overview of roofing materials, tools, equipment, and terminology. Students learn fundamental safety practices including OSHA regulations, fall protection systems, ladder safety, hazard recognition, and emergency response procedures essential for working at heights in commercial and residential roofing applications. This course is only open to roofer apprentices. Level I Prerequisite: Academic Reading and Writing Levels of 6

**RFA 111 Single-Ply Roofing Systems (5 Credits)**
RFA
Students develop proficiency in the installation, repair, and maintenance of single-ply membrane roofing systems. Topics include thermoplastic polyolefin (TPO), polyvinyl chloride (PVC), and ethylene propylene diene monomer (EPDM) membranes. Emphasis is placed on proper seaming techniques, flashing details, penetration management, and quality control procedures specific to single-ply applications. This course is only open to roofer apprentices. Level I Prerequisite: Academic Reading and Writing Levels of 6

**RFA 112 Modified Bitumen and Build-Up Roofing (8 Credits)**
RFA
This course covers the principles and practices of modified bitumen and built-up roofing (BUR) systems. Students learn torch-applied, cold-applied, and self-adhering modified bitumen installation techniques, as well as hot asphalt application methods for multi-ply built-up roofing systems. Topics include substrate preparation, proper layering techniques, material selection, and system-specific repair procedures. This course is only open to roofer apprentices. Level I Prerequisite: Academic Reading and Writing Levels of 6

**RFA 113 Steep Slope Roofing Applications (3 Credits)**
RFA
Students examine residential and commercial steep slope roofing systems including asphalt shingles, tile, slate, metal roofing, and wood shakes. The course addresses proper underlayment installation, ventilation requirements, flashing techniques, valley construction, and ridge details. Emphasis is placed on weather-resistant barrier systems and code compliance for various steep slope applications. This course is only open to roofer apprentices. Level I Prerequisite: Academic Reading and Writing Levels of 6

**RFA 114 Waterproofing, Building Envelope, and Green Technologies (4 Credits)**
RFA
This course explores below-grade and above-grade waterproofing systems, building envelope principles, and sustainable roofing technologies. Topics include dampproofing applications, foundation waterproofing, air and vapor barrier systems, thermal performance, and moisture management. Students also learn about vegetative roof systems, cool roofing technologies, solar-ready installations, and energy-efficient roofing practices that support green building standards. This course is only open to roofer apprentices. Level I Prerequisite: Academic Reading and Writing Levels of 6