

FACILITY MAINTENANCE OCCUPATIONAL ENDORSEMENT

University of Alaska Fairbanks Northwest Campus

The Facility Maintenance Occupational Endorsement Program trains students to identify, troubleshoot and customize solutions to a building or home need; to track and analyze past maintenance trends; and to develop strategies for future maintenance needs. Students will gain a clear understanding of hand and power tool use, construction techniques for interior and exterior repairs, moisture and finishing protection, safety concepts, dry-wall repair, installing floor coverings and cabinets, maintaining boilers and burners, and basic plumbing.

COURSES

CTT F100: Construction Technology Core

Basic construction techniques using OSHA approved standards by stressing how to follow safe work practices and procedures, how to safely use hand and power tools, how to extract information from construction blueprints and drawings, good housekeeping habits, and material handling on the construction site.

CTT F106: Construction Measuring

Introduction to basic mathematical procedures commonly used in the construction and maintenance crafts. Includes multiplication, subtraction, addition, division, working with fractions and measuring areas, volume and capacity of shapes.

CTT F131: Interior Repairs

Provides students with basic skills needed to install and repair drywall. Students will learn how to identify components of drywall assembly and identify tools and fasteners needed to install drywall. Students will identify different materials and proper tools needed in drywall finishing.

CTT F132: Flooring Installation

This course will introduce students to concepts and practical applications of installing vinyl, wood and parquet floor coverings. Students will learn how to install underlayment, vinyl flooring tiles, trim and baseboard components, and be introduced to tools needed for correct installation of parquet flooring with subflooring.

CTT F133: Cabinet Installation with Countertops

This course covers basic concepts of installing cabinets with countertops, and provides information about various types of cabinet construction: stock, semi-custom and custom built. Students will learn about different types of wood products and special shop tools. Students will receive face-to-face instruction and get practice with several techniques for installing base cabinets and top/wall cabinets.

CTT F135: Boiler Troubleshooting and Burner Repair

This course focuses on the basic components of boilers and burners used in industry for heating residential properties. Students will learn about key concepts and strategies related to the process and safe operation of combustion; boiler thermodynamics; control systems; fuel pumps; ignition systems; draft and venting principles; and boiler operation according to hydronic principles and Alaska code.

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Required Courses (10 courses, 18 credits)			
Course	Credits	Hours	Days
Construction Technology Core			
CTT F100	3	53	10
Construction Measuring			
CTT F106	3	45	10
Interior Repairs			
CTT F131	1	16	3
Flooring Installation			
CTT F132	1	16	3
Cabinet Installation with Countertops			
CTT F133	1	20	4
Boiler Troubleshooting and Burner Repair			
CTT F135	2	27	6
Appliance Troubleshooting and Repair			
CTT F137	2	27	6
Residential Heating Controls			
CTT F138	2	27	6
Door and Window Installation			
CTT F141	1	16	3
Plumbing Piping and Tools			
CTT F153	2	27	6

CTT F137: Appliance Troubleshooting and Repair

This course teaches concepts and practice in troubleshooting, repairing, and replacing components in appliances such as refrigerators, washers, dryers, dishwashers, ovens, cook-tops, and Toyo or Monitor heating stoves. Students will learn critical thinking and problem-solving skills while learning to measure electrical current using voltmeters, to analyze malfunctions, and to recognize common appliance problems.

CTT F138: Residential Heating Controls

This course teaches concepts and skills for the student wishing to become a residential heating control technician. Topics include diagnosing equipment problems and testing and adjusting conventional/electronic thermostats. Students will learn about the operation of common electrical circuits used to control residential heating systems.

CTT F141: Door and Window Installation

Introduces students to door and window installation. Students will learn skills and trade techniques of installation, finish casing and trim. Course will identify Rough Openings (RO) and RO sizing. Introduction to tools necessary for correctly and safely installing doors and windows.

CTT F153: Plumbing Piping and Tools

Introduction to basic hand and power tools and various types of piping used in the plumbing industry. Methods of joining various types of pipe and a variety of fittings commonly found in commercial and residential dwellings. Basics of reading plumbing blueprints and drawings, including specific drawings such as isometrics and oblique pictorial.

