Skill Enhancement Course Descriptions

Acoustical Ceilings
Acoustical Soffits
Advanced Drywall Hanging
Advanced Exterior Framing & Lath
Advanced Framing-Curves and Arches
Advanced Interior Systems Layout
Advanced Print Reading
Advanced Print Reading for Interior Systems
AutoCAD®
Basic Lath
Basic Metal Framing & Drywall
Basic Stair Building
Best Practices in Healthcare Construction: In Occupied Facilities
Bridge Falsework
Builders Level & Transit
Cabinetmaking - The Panel Processing System
Clean Room Assembly
Commercial Door Hardware
Commercial Steel Framing
Computer Basics
Concrete Forms
Dome Ceilings / Lathing
Door / Door Frames Interior Systems
Drywall Acoustical Ceilings
Exterior Insulation Finish Systems
Firestop / Fireproofing
Free-Form Lathing
GE® Gas Turbine Familiarization
Gypsum Board Trims
Human Performance
Ingersoll-Rand® Door Hardware Certification
Ingersoll-Rand® Door Hardware Certification Refresher
Ingersoll-Rand® Electrified Door Hardware
Insulating Concrete Forms
Lathing Ceilings
Light Gauge Welding – AWS
Machinery Alignment Procedures
Millwright Precision Optical Alignment
Plaster Equipment
Pre-Fabricated / Sound Panel Installation
Print Reading
Print Reading for Interior Systems
Production Drywall Hanging
Residential Steel Stud Framing
Rigging
Roof Framing
Scaffold Erector, Welded Frame / Mobile Tower
Shaft Liner Installation

Siemens-Westinghouse® Combustion Turbine Program
Soffit Framing
Solid Surface Installation Certification
Solid Surface Installation Certification Refresher
Standard Scaffold Training
Structural Welding – AWS
Systems Scaffold Training
Timely® Door Frame Installation
Total Station
Total Station 2
Tube & Clamp Scaffold Training

ACOUSTICAL CEILINGS (16 Hours)

This is an introduction to Acoustical Ceilings used in the Interior Systems Industry. Material identification, ceiling layout and installation of 2'-0" x 4'-0" and 2'-0" x 2'-0" acoustical grid with related building codes, and seismic codes will be discussed and applied. Basic math, print reading and tool-related safety concerns will be covered.

ACOUSTICAL SOFFITS (16 Hours)

This workshop will provide a more advanced knowledge and skill of soffits used in the Acoustical industry. This workshop will focus on building square, slant faced, tapered and sloped soffits using acoustical grid. Print reading fundamentals, methods for layout, and installation procedures are discussed and demonstrated. The types of tools used, material handling, and their associated safety will be covered.

ADVANCED DRYWALL HANGING (8 Hours)

This workshop will provide a more advanced approach for accurately preparing drywall panels for installation. Methods for taking measurements for required openings or penetrations including in and around structures will be discussed and demonstrated. The types of tools used, material handling, and their associated safety as well as applied math will be covered.

ADVANCED EXTERIOR FRAMING & LATH (24 Hours)

This workshop is an introduction to exterior framing and substrates used in the interior/exterior system industry. Various structural framing and their substrates, which include sheathing, lath and trim applications will be discussed and applied. Print reading fundamentals, methods for layout, and installation procedures are discussed and demonstrated. The types of tools used, material handling, and their associated safety will be covered.

ADVANCED FRAMING – CURVES & ARCHES (16 Hours)

This workshop presents instruction in methods for curves and arches and their structural limitations used in the interior systems industry. Material identification, layout, framing, and finish materials used for walls and ceilings will be discussed and applied. Basic math, print reading, tool use and related safety concerns will be covered.

ADVANCED INTERIOR SYSTEMS LAYOUT (8 Hours)

This course is designed to instruct in the use, and layout, of angles, octagons, segmental, and elliptical arches using a tape measure, chalk box and a $5.00 calculator. The layout methods learned can be applied to all areas of the interior systems trade.

ADVANCED PRINT READING (24 Hours)

In this course, students will analyze multi-view drawings to determine construction type, locate benchmark, find building element, references, and perform calculations for construction purposes. The training will include sketching, material take-off, labor estimation, and the methods used to interpret schedules and specifications.

ADVANCED PRINT READING FOR INTERIOR SYSTEMS (24 Hours)

This course will provide in-depth training for on-the-job print reading. Basic concepts presented in Print reading will be reviewed. The role of building codes and standards will be discussed. Students will complete advanced layout tasks and solve construction problems using plans and specifications used in commercial construction.

AUTOCAD® (40 Hours)

This entry level Computer Aided Drafting course is designed for those possessing basic computer skills with little or no CAD experience. Utilizing the universally popular AutoCAD software, participants are introduced to basic two-dimensional drafting principles which reinforce their print reading abilities and provide a basis for jobsite communication through computer technology. This course fuels an individual's ability to be creative and constructive through design and provides the tools necessary to perform various job sized layouts. Participants learn the application user interface and toolbar functions in order to produce printable plans to scale.

BASIC LATH (16 Hours)

This course presents the basic principles and installation of lath used in the interior/exterior system industry. Proper waterproofing, lath and trim installation will be explained and demonstrated. The types of tools used and their associated safety, as well as applied math and print reading fundamentals will be covered.

BASIC METAL FRAMING & DRYWALL (16 Hours)

This workshop is designed to introduce students to light gauge steel framing used in the interior systems industry. This course identifies tools, framing materials, layout, and building methods. Framing construction including openings, drywall application, and various types of trim will be discussed and applied. Basic math, print reading, tool use and related safety concerns will be covered.

BASIC STAIR BUILDING (12 Hours)

This course covers calculations of riser height, tread cut and length of stairwell. Shop activities will include the layout and assembly of an open and closed stringer stair. Additional shop projects are available and will be provided along with the reference materials pertinent to this class.

BEST PRACTICES IN HEALTHCARE CONSTRUCTION: IN OCCUPIED FACILITIES (24 Hours)

A major issue with hospitals today is secondary infections caused by cross contamination during hospital remodels. Removing ceilings, walls, flooring, etc. releases germs, mold, or anything else that is trapped behind ceilings and walls, and under floors and baseboards. If not handled properly these infectious agents are transferred through HVAC systems, tracking on the feet, drafts, etc. to other parts of the hospital where patients' compromised immune systems are susceptible to these secondary contagions. As a result, hospitals are now looking for contractors and workers who have been specifically trained in how to minimize cross contamination during construction.

BRIDGE FALSEWORK (40 Hours)

This course presents the basic installation techniques and procedures used to install a typical structure support system for concrete formwork. Falsework components, materials, and site preparation will be discussed. Students will complete a project that includes deck form construction to facilitate the falsework support system installation. Related safety, math and print reading will also be covered.

BUILDERS LEVEL & TRANSIT (16 Hours)

This workshop will cover converting hundredths of a foot to fractions of a foot, shooting grades/elevations, turning angles into degrees, minutes, and seconds, and layout of building lines from prints, as well as instrument terminology.

CABINETMAKING – THE PANEL PROCESSING SYSTEM (16 Hours)

This workshop will highlight the Panel Processing System for building casework. Students learn how to combine their traditional casework methods with 21st Century technology to economically and efficiently produce quality cabinets. Our primary focus will be on Frameless, or European 32mm style construction. We will discuss various types of cabinets and the different panel processing machines and techniques necessary to produce them.

Each student will construct a small project utilizing equipment such as the table saw, panel saw, panel router, edgebander, hinge inserter and the CNC Point to Point machines. The 32mm system, related hardware and discussions on the use of case clamps, drilling and dowel insertion machines and specialized CNC equipment.

CLEAN ROOM ASSEMBLY (16 Hours)

Computer component manufacturers and companies involved in space age technologies need clean rooms. This workshop is designed to help you in this rapidly expanding market.

COMMERCIAL DOOR HARDWARE (8 Hours)

This course is designed to teach an inexperienced hardware person the basics of hanging hardware. From drilling and tapping holes to adjusting closer arms, this class will prepare the person who hasn't had much hardware installation experience to take the Ingersoll-Rand Door Hardware Certification class.

COMMERCIAL STEEL FRAMING (40 Hours)

This course covers the majority of applications of steel framing in commercial buildings today. We will be focusing on three curtain wall/panel applications: continuous or by-pass, infill, and Spandrel systems, load bearing framing of floors, walls and roofs and two roof applications: trusses and rafters for gable, hip and mansards.

COMPUTER BASICS (40 Hours)

This introductory course begins with the basics on Microsoft® Windows and Office software as used in the construction and training industry today. An emphasis on how computer hardware and software function and the role operating systems play in helping individuals interact for creating and modifying filing systems for media and documentation.

CONCRETE FORMS (16 Hours)

Building concrete forms is a core Carpenter skill. This workshop will cover procedures for building many types of forms including wall, pilaster, and column forms.

DOME CEILINGS / LATHING (16 Hours)

This course will cover the construction and installation of a suspended lath dome. Tools, material identification, layout, framing, and finish materials used, will be discussed and applied in constructing a dome ceiling. Basic math, print reading, tool use and related safety concerns will be covered.

DOOR / DOOR FRAMES INTERIOR SYSTEMS (16 Hours)

This workshop is an introduction to doors and door frames used in the interior systems industry it is designed to familiarize students with door frames, doors, and their associated hardware. Door layout and installation techniques will be covered and applied. The types of tools used and their associated safety as well as applied math and print reading fundamentals will be covered.

DRYWALL ACOUSTICAL CEILINGS (16 Hours)

This workshop is designed to introduce the student to the standards and methods of assemblies and codes required for drywall acoustical ceiling construction used in the Interior Systems Industry. The student will have a working knowledge of material identification, layout, and application of drywall or lath to the acoustical ceiling grid system.

EXTERIOR INSULATION FINISH SYSTEMS (EIFS) (16 Hours)

This workshop is an introduction to exterior insulation finish systems including terminology, specifications and properties. Methods and techniques for reinforcing mesh installation and the application of insulation board will be demonstrated and applied. The types of tools used and their associated safety, as well as applied math and print reading fundamentals will be covered.

FIRESTOP / FIREPROOFING (8 Hours)

This workshop is designed to cover fireproofing which is a passive fire protection measure, this refers to the act of making materials or structures more resistant to fire, or to those materials themselves, or the act of applying such materials. Applying a certified listed fireproofing system to certain structures allows them to have a fire-resistance rating. The types of tools, materials used, and applications, will be applied and demonstrated.

FREE-FORM LATHING (16 Hours)

Amusement parks, zoos, shopping malls, and theme hotels and restaurants are a few examples of places where free-form lath projects can be found. This workshop covers the materials, tools and methods used in creating free-form structures which can include rocks, waterfalls and theme characters. Basic print reading, tool use and related safety concerns will be covered.

GE® GAS TURBINE FAMILIARIZATION (16 Hours)

This workshop is for UBC members that work on GE® Gas Turbines. Day 1 covers identification of GE® Gas Turbine components, disassembly procedures, inspections, and re-assembly procedures. Day 2 covers new installations of GE® Gas Turbines.

GYPSUM BOARD TRIMS (16 Hours)

This course is designed to teach the basics of gypsum board application and finish trims. The proper installation of corner bead, flex tape, L-Metal and the proper steps to tape finish trims will be demonstrated and applied.

HUMAN PERFORMANCE (8 Hours)

The goal of Human Performance training is to build the skills to use HP practices and tools to safely navigate through an error-likely situation, without causing harm to yourself, others, and the equipment that you are working on. Using Human Performance practices and techniques maintenance work can be managed more effectively and errors don't have to lead to losses in safety, quality, and productivity. Siemens® Generation Services Company (SGSC) is requiring that every Millwright working for them must have completed a 1-day Human Performance class by September 1, 2010.

INGERSOLL-RAND® DOOR HARDWARE CERTIFICATION (24 Hours)

The curriculum and testing required to meet Ingersoll-Rand® Architectural Hardware Division's requirement for Hardware Installation Certification will be presented.

INGERSOLL-RAND® DOOR HARDWARE CERTIFICATION REFRESHER (16 Hours)

A 16 hour refresher course for the IR Door Hardware Certification. This course covers approximately 80% of all the latest materials and includes some new electronic locking devices.

INGERSOLL-RAND® ELECTRIFIED DOOR HARDWARE (8 Hours)

An 8 hour class that covers the mechanics of electric door hardware installation do's and don'ts.

INSULATED CONCRETE FORMS (16 Hours)

Participants in this class will learn the proper handling, assembly and pouring of concrete for four different types of Insulating Concrete Forms (ICF's). Installation of door and window bucks as well as bracing and scaffolding installation techniques are covered. Although ICF's are mainly used in residential construction, buildings up to 10 stories can be poured using these form systems. It appears that this area of the trade is ready for trained personnel in many areas of the U.S.

LATHING CEILINGS (8 Hours)

Designed to guide the student through the related print reading, layout, tools, materials and standard lathing skills needed to install a suspended lath ceiling for plastering. Lathing terminology, trim components, size and spacing requirements will all be combined in a shop project.

LIGHT GAUGE WELDING – AWS (40 Hours)

This course covers light gage welding methods and techniques. American Welding Society (AWS) welding processes, symbols, materials and safety procedures will be presented. An emphasis on hands-on experience will reinforce proper use of the welding procedures applicable to the interior systems industry. Students will develop the practical skills needed to pass the AWS Light Gage Certification Welding Test.

MACHINERY ALIGNMENT PROCEDURES (40 Hours)

Machinery alignment is the core of millwright work. This workshop will cover elimination of soft foot, rim-face alignment, reverse dial alignment, thermal expansion and vertical alignment. Please bring a scientific calculator to the workshop.

MILLWRIGHT PRECISION OPTICAL ALIGNMENT (40 Hours)

Participants in this workshop will learn to use jig transits to level and align machinery. Standard optical alignment procedures will be presented and participants will learn how to solve specific alignment constructor problems.

PLASTER EQUIPMENT (8 Hours)

This workshop is designed for the safety and use of the "Tommy Gun" plastering equipment. Several configurations for a variety of applications can be used; options include plaster or high volume fireproofing. Safety precautions, parts identification, set-up and maintenance as well as trouble shooting will be demonstrated and applied.

PRE-FAB / SOUND PANEL INSTALLATION (16 Hours)

This workshop will focus on the technical knowledge and skills needed for the installation of prefabricated wall and ceiling panel systems. Acoustical principles and the theory of sound will be discussed as well as material application for sound control. Print reading fundamentals, methods for layout, and installation procedures are discussed and demonstrated. The types of tools used, material handling, and their associated safety will be covered.

PRINT READING (40 Hours)

This course is designed to familiarize the student with the plan "D" set of commercial carpenter blueprints, specifications and workbooks in its various forms. It will also introduce residential, industrial, millwright, scaffold, interior systems, bridge and highway and other specialty prints.

PRINT READING FOR INTERIOR SYSTEMS (40 Hours)

This course introduces basic visualization skills needed for reading and interpreting construction prints. It will identify the various components found on a typical drawing and highlight their significance. Views and elevations will be discussed as well as the role of specifications as they relate to prints.

PRODUCTION DRYWALL HANGING (8 Hours)

This workshop will focus on the needed skills to properly safely handle and install drywall efficiently. Proper material set-up, layout, cutting, attachment procedures and productivity techniques will be discussed and practiced.

RESIDENTIAL STEEL STUD FRAMING (16 Hours)

This workshop will highlight the residential light gauge steel framing industry. Information on the work processes, fastening requirements, and specialized tooling required to work in the residential steel stud industry will be presented.

RIGGING (32 Hours)

The UBC rigging course is a comprehensive thirty-two (32) hours of rigging training. Classroom instruction and hands-on training provides the participants with the latest information on rigging hardware and procedures. Safety is emphasized in every work process. Load calculations, sling choice and hand signals are some of the many topics covered during the 32 hours of this program. Students must successfully demonstrate the ability to rig a mock-up lift, communicate using hand signals, using radio signals, correct choice, and proper use of hardware and safe lifting and positioning the load with the help of a crane. A UBC photo ID card with a four (4) year expiration date will be issued to those participants successfully completing this course. Rigging refresher training will be available at a training center near you.

ROOF FRAMING (12 Hours)

This workshop is designed to cover the terminology, mathematical equations, mathematical concepts, total run, total rise, ridge adjustment, total line lengths of common rafters, differences for gable end studs, the cut of a roof from a given total rise, roof framing materials, and cutting of all jack rafters used in the valley and hips.

SCAFFOLD ERECTOR, WELDED FRAME / MOBILE TOWER (16 Hours)

This program, developed in partnership with OSHA and the D.O.E, addresses OSHA safety regulations for scaffolding, scaffold introduction and specific procedures for erecting welded frame and mobile tower scaffold. A sixteen (16) hour workshop includes classroom instruction and hands-on erection and dismantling of welded frame and mobile tower scaffolding.

Students successfully completing this training will be issued a photo ID card from the UBC with a four (4) year expiration date. Scaffold refresher training will be available at a training center near you. This course meets or exceeds OSHA requirements for scaffold training using welded frame and mobile tower scaffold components.

SHAFT LINER INSTALLATION (16 Hours)

This workshop addresses metal-framed shaft wall systems designed to isolate elevators, stairwells, mechanical shafts, and other spaces from adjacent interior spaces. Methods for layout and installation procedures are discussed and demonstrated. The types of tools used, material handling, and their associated safety as well as applied math will be covered.

SIEMENS-WESTINGHOUSE® COMBUSTION TURBINE PROGRAM (16 Hours)

This workshop is the new Siemens-Westinghouse® CT program. Additionally, this workshop incorporates the new Hytorc Bolting Qualification course. Participants will complete the training requirements listed in the letter of understanding between the UBC and Westinghouse.

SOFFIT FRAMING (16 Hours)

This workshop will cover soffit use and construction techniques such as conventional framing as well as prefabricated parts to build soffits and light pockets. Basic print reading, related math, layout, and installation, tool use and related safety concerns will be covered and applied.

SOLID SURFACE INSTALLATION CERTIFICATION (16 Hours)

This workshop is designed to take the participating carpenter on a journey through the world of fabricating and installing composite acrylic/polyester countertops using traditional woodworking tooling. The following manufacturers recognize participants who successfully complete this workshop as Certified Installers only: Wilsonart International – Wilsonart Solid Surfacing®, Formica Corporation – Formica Solid Surfacing®, DuPont - Corian®, Avonite Incorporated - Avonite®.

SOLID SURFACE INSTALLATION CERTIFICATION REFRESHER (8 Hours)

This refresher workshop updates the solid surface installer with a review of the materials and it's properties, job planning, fabrication, installation and repair information. Emphasis is placed on the current technology and all manufacturers' latest installation and repair recommendations to aid in boosting job production and efficiency.

STANDARD SCAFFOLD TRAINING (40 Hours)

This scaffold training program is for Carpenters that are not regular scaffold erectors or carpenters and apprentice carpenters who may have little or no experience in the erection of scaffolding. Classroom instruction addresses both California OSHA and Federal OSHA regulations that apply to the safe erection of scaffolding. The course includes the basic types of scaffolding found on many jobsites, welded frame and mobile tower, tube and clamp, and systems scaffolding. Hands-on training is provided for each type of scaffolding. Fall protection, personal protective equipment, inspection and hazard awareness are an important part of this training program. This course meets or exceeds both CAL-OSHA and Federal OSHA training requirements for scaffold training. Students successfully completing this course will be issued a photo ID card from the UBC. The card will have a four (4) year expiration date. Scaffold refresher training will be available at a training center near you.

STRUCTURAL WELDING – AWS (80 Hours)

This course is designed to prepare the student to obtain an AWS structural welding certificate per AWS D1.1 Structural Welding Code, the welding of plates that are 1⁄8" to unlimited thickness. Students must obtain AWS certification to receive credit for class.

SYSTEMS SCAFFOLD TRAINING (16 Hours)

This course is designed to prepare the student to complete the installation of systems type scaffolding and provide hands-on practice in layout and erection of systems type scaffolding. Classroom training includes fall protection, inspection, hazard awareness, safe access, and OSHA regulations.

TIMELY® DOOR FRAME INSTALLATION (8 Hours)

This workshop is designed for the layout, framing, and installation of a Timely® Door Frame. Timely® Door Frame options will be discussed as well as the necessary rough opening sizes required for their installation.

TOTAL STATION I (40 Hours)

Prerequisite: You must take the Builders Level/Transit TTT prior to taking this class or you must have one year minimum Builders Level/Transit experience in the field. This workshop covers the use of Total Station equipment and their application to field layout. The transfer of data from field drawings and CAD programs to the Total Station in the field for layout tasks will also be covered. Classroom training combined with hands-on training with the Total Station equipment will provide the skills necessary to operate this equipment in the field. Three different types of total stations are covered in this class.

TOTAL STATION II (40 Hours)

Prerequisite: You must take Total Station 1 prior to taking this workshop. This workshop covers computer interaction, file creation, data management and basic AutoCAD® relating to Total Station technology. The spectrum of file creation from blueprints using AutoCAD® as well as using existing AutoCAD® electronic drawings (created by a design team) is incorporated into the curriculum. Data will be created, managed and downloaded to the data recorder, then taken to the field for layout application. Many of the finer points of managing the layout tasks on a project will be incorporated into this class. Classroom computer training using AutoCAD® and TDS® ForeSight Coordinate Geometry software combined with hands-on Data Recorder and Total Station Instrument training will round out the layout experience. Four different types of instruments are covered in this class.

TUBE & CLAMP SCAFFOLD TRAINING (20 Hours)

This course is designed to prepare the student to complete the installation of tube and clamp scaffolding and provide hands-on practice in layout and erection of tube and clamp scaffolding. Classroom training includes fall protection, inspection, hazard awareness, safe access and OSHA regulations for tube and clamp scaffolding.