

**AP C 257 Specialty Scaffold Applications (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Includes specialty scaffold applications focusing on ramps, chutes and mobile towers suitable for light and heavy duty use. Students will learn the characteristics of commercial and industrial scaffold construction. Selected projects will introduce the techniques and procedures used for access/egress, debris handling, and maintenance scaffolds.

**AP C 258 Scaffold Reshoring (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Present students with the modified principles and techniques for the use of shoring equipment in a re-shore application. The importance of uniform loading and alignment of multi-tower/tandem tower configurations will be covered. Students will identify and erect scaffold equipment using three types of configurations suitable for scaffold re-shoring purposes.

**AP C 259 Scaffold-Printreading (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Fundamentals of reading construction prints. Scaffold print views, lines, dimensioning methods, symbols and details will be covered. In addition to print interpretation, sketching techniques will be introduced and students will draw several scaffold views incorporating the basic print elements presented during the class.

**AP C 260 Scaffold-Advanced Printreading (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Expansion of basic printreading ability to include project take-off, estimation, and layout accuracy. Methods used to determine datum and reference locations will be covered. References will be taken from multi-view drawings and students will evaluate the information to locate and orient scaffold for accurate site placement.

**AP C 261 Basic Wall Framing (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Presents the theory, methods, and procedures required to frame basic walls. Hands-on practice using proper tool techniques and appropriate materials will enhance fundamental skill development. Beginning with an introduction to print reading, students will perform: basic wall layout; plating procedures; framing assembly and bracing; before aligning and completing selected wall construction project to industry standards.

**AP C 262 Intermediate Stairs (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Uses floor plans and print elevations at an intermediate level to enhance development of basic stair construction skills. Students will interpret prints to complete job planning, project layout, and material cut list for "L" shaped stair designs. Stair calculations will be used to determine the number of stairs, landing height, stair thread and riser dimensions for the assigned project.

**AP C 263 Advanced Roof Framing (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Provides an introduction to hip roof framing, terminology and construction characteristics. Students will interpret print views and elevations for job planning; to determine rafter systems and layout details. Basic rise, run, rafter angles and length calculations will be performed. Framed wall construction will be incorporate to facilitate the hip roof assembly techniques and installation procedures that are the focus of this training.

**AP C 264 Abutments (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Provides instruction in the detailing, layout and construction of abutments used in the heavy highway industry. The terms, components, materials, building techniques and procedures will be presented. The class project includes keyway, panel, head wall and wing wall construction

**AP C 265 Rigging (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Presents both lifting theory and practical rigging methods and procedures. The design, characteristics and safety working load of lifting hardware will be discussed. Rigging attachment procedures, lifting equipment, limits of operation and communication practices will be covered.

**AP C 266 Solid Surface (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Covers both basic and advanced assembly and installation techniques for use of solid surface materials. Manufacturer's products, materials, safety and design considerations will be included. Students will use the proper procedures to layout, cut shapes, form joints, add edges and backsplashes, and create design inlays for countertop installation projects.

**AP C 267 Panelized Roof (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Covers the structural components and building techniques associated with heavy timber construction and panelized roof systems. The advantages and types of manufactured wood used, and their load carrying strength, span, and spacing will be discussed. A distinction between standard post and beam, and heavy timber construction will be emphasized. Students will interpret floor plan, section views and drawing elevations for job planning, and to layout and construct a heavy timber post and beam supported panelized roof.

**AP C 268 Fitting Rooms/Partitions (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Compare styles, attachment methods and installation techniques for various fitting room and partition fixtures. Framing elements, mounting brackets, and panel products will be covered in both discussions and lab activities. Proper layout, leveling and securing methods will be included and applied in selected fitting room and partition applications.

**AP C 269 Exit and Electrical Security Devices (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Highlight the classification and various types, models and uses for accident hazard exit ("panic") devices. A range of security products and miscellaneous types of door hardware used in the industry such as crossbars, latches, flush bolts, and kick plates will be discussed. Proper selection, installation and adjustment techniques for four types of devices will be covered. Students will complete installation and adjustment of two types of exit devices.

**Drywall/Lather (AP DL)**

A three-year apprenticeship program. Applicants for this program should be directed to the Carpenters Joint Apprenticeship and Training Committee for Southern California, San Diego Carpenters Training Center, 8595 Miralani Drive, San Diego, CA 92126. Telephone (858) 621-2667.

**A.A. DEGREE MAJOR OR  
CERTIFICATE OF ACHIEVEMENT**

Program Requirements		Units
AP DL/AP PL/		
AP AC 201	Orientation	1.5
AP DL/AP PL/		
AP AC 202	Safety and Health Certifications	1.5
AP DL/AP PL/		
AP AC 203	Printreading	1.5
AP DL/		
AP PL 205	Basic Lathing	1.5
AP DL 206	Framing Ceilings and Soffits	1.5
AP DL 207	Basic Metal Framing	1.5
AP DL 208	Framing Suspended Ceilings	1.5

AP DL 209	Framing Curves and Arches	1.5
AP DL 210	Light Gage Welding - AWS - A	1.5
AP WE 112	Drywall/Acoustical Work Experience	16

**Electives (Select 3 courses)**

AP DL/		
AP AC 204	Advanced Printreading	1.5
AP DL 211	Light Gage - L.A. City Certification	1.5
AP DL 212	Basic Hand Finishing	1.5
AP DL 213	Drywall Acoustical Ceilings	1.5
AP DL 214	Door/Door Frames	1.5
AP DL/		
AP PL 215	Exterior Insulation Finish Systems (EIFS)	1.5
AP DL/		
AP PL 216	Firestop/Fireproofing Procedures	1.5
AP DL 217	Free-Form Lathing	1.5
AP DL 218	Automatic Finishing Tools	1.5
AP DL 220	Drywall Installation/Finish Trims	1.5
AP DL 221	Advanced Hand Finishing	1.5
AP DL 222	Advanced Automatic Finishing Tools	1.5
AP DL 223	Advanced Lathing	1.5
AP DL 224	Ceiling and Soffit Finishing	1.5
AP DL 225	Wet Wall Finishes	1.5
AP DL 226	Reinforced Substrate Installations	1.5
AP DL 227	Decorative Trims and Textures	1.5
AP DL 228	Drywall Applications	1.5
AP DL 229	Advanced Metal Framing	1.5
AP DL 197	Drywall Lather Topics	5-4

**TOTAL UNITS** **34**

**COURSE OFFERINGS****AP DL 197 Drywall/Lather Topics (1.5 - 4)**

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.

**Prerequisite:** Indentured apprentice to the Carpenters Joint Apprenticeship and Training Committee for Southern California

**Note:** May be taken 4 times

Topics in Drywall/Lather. See Class Schedule for specific topic offered. Course title will designate subject covered.

**AP DL 201 Orientation (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Prerequisite:** Indentured apprentice to a designated Joint Apprenticeship and Training Committee

**Note:** Cross listed as AP PL 201/ AP AC 201; may be taken two times

Designed to introduce the apprentice to the Interior Systems program. The content of the course will include safe and proper use of hand tools, power tools, trade related math, beginning print reading and layout as well as safety certifications. Certifications will include scaffold erector/dismantler (welded frame) and low velocity powder actuated tools.

**AP DL 202 Safety and Health Certifications (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** Cross listed as AP PL 202/ AP AC 202; may be taken two times

Provides safety and health training that meets the needs of the Interior Systems industry. The content of the course will include certification in Power Industrial Trucks, Aerial Lift, American Red Cross First Aid / CPR/ AED, and OSHA 10.

**AP DL 203 Printreading (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** Cross listed as AP PL 203/ AP AC 203; may be taken two times

Introduces basic visualization skills needed for reading and interpreting construction prints. Identifies the various components of a typical drawing and highlights their significance. Views, elevations, and the role of specifications as they relate to prints will be discussed. Students will complete a basic layout using information from a typical print for a commercial project.

**AP DL 204 Advanced Printreading (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Prerequisite:** A minimum grade of 'C' in AP DL/ AP AC 203

**Note:** Cross listed as AP AC 204; may be taken two times

Will provide in-depth training for on-the-job print reading scenarios. Basic print reading concepts, presented in Printreading, will be reviewed. The role of codes and regulations will be discussed. Advanced layout tasks and solutions to typical construction problems using plans and specifications for a commercial construction project will be included.

**AP DL 205 Basic Lathing (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** Cross listed as AP PL 205; may be taken 2 times

Presents the basic lathing methods used in the industry for exterior/interior installations. Students will use the skills presented to complete a lathing project as part of this course.

**AP DL 206 Framing Ceilings and Soffits (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** May be taken 2 times

This course is designed to provide instruction in the basics of framing ceilings and soffits with drywall and lath application. Related safety, math and blueprint reading will be covered.

**AP DL 207 Basic Metal Framing (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** May be taken 2 times

An in-depth study of basic material identification, print layout, framing, drywall applications and proper trim applications for the Drywall/Lath industry. Safety, math and blueprint reading will be covered.

**AP DL 208 Framing Suspended Ceilings (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** May be taken 2 times

This course is designed to provide related classroom instruction with the technical skills and knowledge to successfully frame any suspended ceiling in drywall and lath. Related hand and power tool safety, math and blueprint reading will be covered.

**AP DL 209 Framing Curves and Arches (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** May be taken 2 times

Provides instruction in framing methods for curves and arches and their related structural limitations. Students will use the skills presented to complete a framing project that includes curves and arches as part of this course.

**AP DL 210 Light Gage Welding - AWS - A (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** May be taken 2 times

Designed to teach the practical skills needed for the arc welding processes and applications. Students will have the practical skills to successfully pass the AWS light gage certification. Related safety, codes and materials will be covered.

**AP DL 211 Light Gage - L.A. City Certificate (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** May be taken 2 times

Assists students in preparing for the Los Angeles City Light Gage Welding Certification. Written and practical skills of the test will be demonstrated and discussed in order to associate the student with the working knowledge necessary to successfully achieve a Los Angeles City Light Gage Welding Certification. Related safety, codes and materials will be covered.

**AP DL 212 Basic Hand Finishing (1.5)**

1 hour lecture - 1 1/2 hours laboratory

**Note:** May be taken 2 times

Develop basic hand finishing skills using the correct tools and materials. Includes a description of finishing levels, hand tool manipulation, material identification, selection, and mixture preparation. Key processes and application techniques will be presented. Students will review plans and specifications, calculate and select materials, and complete a wall project to a level four finish.

**AP DL 213 Drywall Acoustical Ceilings (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Identifies the materials and methods used for the installation of acoustical ceilings. Seismic codes, materials, and requirements are also reviewed. Installation for various grid systems will be discussed. Students will use the skills presented to complete an acoustical ceiling project as part of this course.

**AP DL 214 Door/Door Frames (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Introduction to the basic installation of door frames and various types of doors. Lock sets, closures, hinges, panic hardware, and door sweeps will be discussed and demonstrated.

**AP DL 215 Exterior Insulation Finish Systems (EIFS) (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** Cross listed as AP PL 215; may be taken 2 times

Introduction to the basic working knowledge and technical skills needed to successfully install Exterior Insulation and Finish Systems EIFS (foam products) to meet industry specifications and standards. Introduction to the proper usage of products and materials will be discussed and used.

**AP DL 216 Firestop/Fireproofing Procedures (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** Cross listed as AP PL 216; may be taken 2 times

Emphasis on the correct methods, technical skills and firestop materials required to complete a Firestop System. Firestopping is a complete fire containment system designed to prevent the passage of fire, smoke and hot gasses from one side of a rated wall/ceiling assembly to another.

**AP DL 217 Free-Form Lathing (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Introduction to the techniques and skills needed for construction of freeform lath projects. Layout techniques using grids and projection overlay will be presented. Methods for bending and shaping of rebar and pencil rod, lath handling and tying along with welding and cutting techniques will be demonstrated and applied.

**AP DL 218 Automatic Finishing Tools (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Advanced instruction in blueprints, finish schedules, and machine parts identification, as well as proper use, assembly and breakdown of tools.

**AP DL 220 Drywall Installation/Finish Trims (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Instruction in the basics of gypsum board application and finish trims.

**AP DL 221 Advanced Hand Finishing (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

In depth instruction in hand tool use. The different operations, phases, and materials to be used in order to have information of what a finished product should look like.

**AP DL 222 Advanced Automatic Finishing Tools (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Instruction in the proper methods and sequences of the "bazooka," flat boxes, nail spotters and angle boxes.

**AP DL 223 Advanced Lathing (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

This course will distinguish advance lathing methods and styles from basic application techniques for lath and trim products used on exterior-interior metal framing. Metal framing elements, various bead styles, lathing types and substrates will be covered in both discussions and lab activities. Proper leveling and finishing methods will be demonstrated. Students will apply lath and trim using the techniques presented to complete course projects.

**AP DL 224 Ceiling and Soffit Finishing (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Designed to provide an advanced level of finishing skill for applications with architecturally detailed ceilings and soffits. Guided practice with a combination of hand and automatic tool techniques will promote the level of manipulative ability required for a successful result. A variety of finish trims will be integrated into each method of finish. Training will conclude with inspection criteria for evaluating finish levels.

**AP DL 225 Wet Wall Finishes (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Presents the industry use, application methods, and product mediums typically used for wet wall finishes. The techniques and procedures used to achieve a level five finish to industry standards requires base and top coating of interior surfaces for inspection purposes. Selection and use of painting equipment and coatings will be included in the training.

**AP DL 226 Reinforced Substrate Installations (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Presents the applications techniques and product considerations typical of reinforced substrate installations. The training will focus on Glass Fiber Reinforced Gypsum and Glass Fiber Reinforced Concrete (GFRG) & (GFRC) products. The lab project will include layout, cutting and handling practices, attachment methods, alignment and various related installation methods.

**AP DL 227 Decorative Trims and Textures (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Provides advanced hand and automatic tool finishing techniques used in the application of decorative trims and special surface textures. Training includes product information for metal, paper, plastics and art beads. Special attention will be given to coating and sanding sequence of field and butt joints for selected surface textures.

**AP DL 228 Drywall Applications (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

Focuses on the needed skills to properly handle and install drywall used in specialized applications including fire resistance, sound control, and life safety. Layout, cutting, attachment procedures and productivity techniques will be discussed and practiced under jobsite conditions. Drywall finishing methods will be incorporated into the hands-on activity.

**AP DL 229 Advanced Metal Framing (1.5)***1 hour lecture - 1 1/2 hours laboratory***Note:** May be taken 2 times

A quick review of basic metal framing will be followed by detailed procedures for framing curved, serpentine, and elliptical non-load bearing partitions. Using standard light-gage components and other materials, the course project will emphasize advanced techniques to expedite work processes.

**Electrician (AP E)**

A five-year apprenticeship program. Applications for Riverside/San Bernardino/Mono/Inyo counties should apply to the Riverside and San Bernardino Joint Electrical Apprenticeship Training. Committees, 1855 Business Center Drive, San Bernardino, CA 92408. Telephone: (909) 890-1703.

**A.A. DEGREE MAJOR OR  
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Program Requirements	Units
AP E 101 Electrical Trade/Industry/DC/Conduit	4
AP E 102 Electrical Theory/Practice/Blueprint Reading	4
AP E 103 Inductance/Capacitance Theory	4
AP E 104 Transformers/Code Calculations/Conduit	4
AP E 105 Electronic/Industrial Blueprints	4