

AP AC 207	Suspended Ceilings	1.5
AP AC 208	Soffits	1.5
AP AC 209	Prefab/Sound Panels	1.5
AP AC 210	Concealed/Glue-up/Staple-up System	1.5
AP AC 211	Compasso	1.5
AP AC 212	Metal Pan and Security Systems	1.5
AP WE 112	Drywall/Acoustical Work Experience	16
<b>TOTAL UNITS</b>		<b>34</b>

### COURSE OFFERINGS

#### AP AC 197 Acoustical Topics (5-4)

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

**Note:** May be taken 4 times

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

#### AP AC 201 Orientation (1.5)

1 hour lecture-1 ½ hours laboratory

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

**Note:** Cross listed as AP DL 201/AP PL 201; may be taken two times  
Introduction to the Interior Systems program. Content includes safe and proper usage of hand tools, power/powder tools, an introduction to trade related math, beginning blueprint reading and layout. Certifications will include Ramset/Red Head or Hilti low velocity power/powder actuated tools and scaffold erector/dismantler (welded frame).

#### AP AC 202 Safety and Health Certifications (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** Cross listed as AP DL 202/AP PL 202; may be taken two times  
Designed to incorporate learning theories, methods and techniques that meet the needs of the Interior Systems industry. Content includes certification in forklift, aerial lift, American Red Cross, First Aid/CPR and OSHA 10.

#### AP AC 203 Printreading (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** Cross listed as AP DL 203/AP PL 203; may be taken two times  
This course is designed to teach the basics of reading, understanding and visualizing the blueprints. Terms, symbols and definitions from several trades will be incorporated. Prints showing both residential and commercial application will be used. Related safety, math and blueprint reading will be covered.

#### AP AC 204 Advanced Printreading (1.5)

1 hour lecture-1 ½ hours laboratory

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

**Note:** Cross listed as AP DL 204/AP PL 204; may be taken two times  
This course will give the student more in depth training related to on the job conditions. Basic estimating, material take offs and organizing jobs will be included.

#### AP AC 205 Acoustical Ceilings (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Instruction in acoustical ceilings, seismic codes and the theory behind them. Practical application in wall molds and trims, ceiling layout and material identification.

#### AP AC 206 Standard Acoustical Grids (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Instruction in acoustical grid installation such as 2 x 4 and 2 x 2 flat "H" pattern, radius, gable and diagonal ceilings.

#### AP AC 207 Suspended Ceilings (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Instruction in the technical skills required to install circular ceilings with drops, drywall suspension grid in both square and circular areas.

#### AP AC 208 Soffits (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Focus on advanced knowledge and skills required to construct square and slant faced, tapered, concealed, drywall suspension, and sloped soffits.

#### AP AC 209 Prefab/Sound Panels (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Instruction in the technical knowledge and skills required for installation of sound panels and prefabricated wall and ceiling panel systems.

#### AP AC 210 Concealed/Glue-up/Staple-up System (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Advanced instruction and semi-concealed ceilings and soffits. Both technical knowledge and skills will be used in assembling these ceilings.

#### AP AC 211 Compasso (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Advanced instruction and application in concealed systems to include installation of air bars, double soffits and compasso. Hand tools are mandatory.

#### AP AC 212 Metal Pan and Security Systems (1.5)

1 hour lecture-1 ½ hours laboratory

**Note:** May be taken 2 times

Instruction in the technical knowledge and skills needed to work with these "high end" products. Hand tools and gloves are mandatory.

### Carpentry (AP C)

A four-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 C 201	Orientation	1.5
AP C 202	Safety and Health Certification	1.5
AP WE 111	Carpentry Work Experience	16

#### Electives (Select 14 courses)

AP C 203	Printreading	1.5
AP C 204	Advanced Printreading	1.5
AP C 205	Foundation and Flatwork	1.5
AP C 206	Flatworks	1.5
AP C 207	Tilt-Up Panel Construction	1.5
AP C 208	Wall Forming	1.5
AP C 209	Gang Forms/Columns	1.5
AP C 210	Patented Forming Systems	1.5
AP C 211	Architectural Concrete	1.5
AP C 212	Column Forms	1.5
AP C 213	Beam and Deck Forming	1.5
AP C 214	Basic Commercial Framing	1.5
AP C 215	Advanced Commercial Framing	1.5
AP C 216	Commercial Floor Framing	1.5
AP C 217	Basic Stairs	1.5
AP C 218	Advanced Stairs	1.5
AP C 219	Exterior Finish Details	1.5
AP C 221	Basic Roof Framing	1.5
AP C 223	Basic Metal Framing	1.5
AP C 225	Transit Level/Laser	1.5
AP C 226	Bridge Construction	1.5
AP C 227	Stair and Ramp Forming	1.5
AP C 228	Stair Trim	1.5
AP C 229	Cabinet Millwork and Assembly	1.5

AP C 230	Cabinet Installation	1.5
AP C 235	Molding and Trim	1.5
AP C 236	Plastic Laminates	1.5
AP C 237	Door and Door Frames	1.5
AP C 239	Door and Door Hardware	1.5
AP C 245	Commercial Fixtures	1.5
AP C 246	Showcases and Loose Store Fixtures	1.5
AP C 247	Basic Suspended Scaffold	1.5
AP C 248	Advanced Suspended Scaffold	1.5
AP C 249	Basic Systems Scaffold	1.5
AP C 250	Intermediate Systems Scaffold	1.5
AP C 251	Advanced Systems Scaffold	1.5
AP C 252	Basic Frame Scaffold	1.5
AP C 253	Intermediate Frame Scaffold	1.5
AP C 254	Advanced Frame Scaffold	1.5
AP C 255	Basic Tube & Clamp Scaffold	1.5
AP C 256	Scaffold in Confined Spaces	1.5
AP C 257	Specialty Scaffold Applications	1.5
AP C 258	Scaffold Reshoring	1.5
AP C 259	Scaffold - Printreading	1.5
AP C 260	Scaffold - Advanced Printreading	1.5
AP C 261	Basic Wall Framing	1.5
AP C 262	Intermediate Stairs	1.5
AP C 263	Advanced Roof Framing	1.5
AP C 264	Abutments	1.5
AP C 265	Rigging	1.5
AP C 266	Solid Surface	1.5
AP C 267	Panelized Roof	1.5
AP C 268	Fitting Rooms/Partitions	1.5
AP C 269	Exit and Electrical Security Devices	1.5
AP C 197	Carpentry Topics	1.5
<b>TOTAL UNITS</b>		<b>40</b>

### COURSE OFFERINGS

#### AP C 197 Carpentry Topics (1.5-4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture, laboratory, or lecture/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 Carpentry. See Class Schedule for specific topic offered. Course title will designate subject covered.

#### AP C 201 Orientation (1.5)

1 hour lecture-1 1/2 hours laboratory

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

**Note:** May be taken 2 times

Introduces the use of various hand and power tools used in the trade. Students will be introduced to the history of trade apprenticeships. Construction math and job site safety practices will also be covered.

#### AP C 202 Safety and Health Certification (1.5)

1 hour lecture-1 1/2 hours laboratory

**Prerequisite:** A minimum grade of 'C' in AP C 201

**Note:** May be taken 2 times

Provides the apprentice with various safety competencies. Students will demonstrate the ability to construct a welded frame scaffold to OSHA standards as well as the operation of a lift truck. In addition they will be introduced to blueprints and their use.

#### AP C 203 Printreading (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

The first of two classes in blueprint reading. Covers the fundamental functions and structure of blueprints. Construction drawings, line symbols, freehand sketching as well as pictorial drawings will be covered.

#### AP C 204 Advanced Printreading (1.5)

1 hour lecture-1 1/2 hours laboratory

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

**Note:** May be taken 2 times

Second of two courses in blueprint reading. Covers foundation prints, commercial prints, residential prints and estimating. Construction specifications will also be covered.

#### AP C 205 Foundation and Flatwork (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

Covers the design and function of several types of foundations and concrete flatwork. The methods, techniques and procedures for formwork layout, elevation, and construction will be presented. Jobsite safety, print interpretation, material identification, and basic use of the builders level will be included in the training. Students will construct three selected formwork projects.

#### AP C 206 Flatworks (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

This course is designed to show the various applications of forming to include slab-on-grade, driveways and walks, and curb and gutter forms. Related safety, math and blueprint reading will be covered.

#### AP C 207 Tilt-Up Panel Construction (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

Designed to give an overview of the Tilt-Up industry. Form techniques and panel hardware will be discussed. Related safety, math and blueprint reading will be covered.

#### AP C 208 Wall Forming (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

Introduces the basic techniques of poured-in-place concrete wall form construction. Related safety, math and blueprint reading will be covered.

#### AP C 209 Gang Forms/Columns (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

Presents the formwork types and construction methods for gang form and column installations. Discussions will cover heavy timber gang forms and use of taper ties, bracing, and bulkhead tables. The course project will include gang and column formwork construction, assembly, and hardware installation tasks. Related safety, math and print reading will be covered in the training.

#### AP C 210 Patented Forming Systems (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

Proprietary wall forming systems such as Atlas, EFCO, and Symons are an integral part of the concrete industry. Students will be instructed in the application and rigging of these systems.

#### AP C 211 Architectural Concrete (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

In this course the forming of poured-in-place columns will be covered, with instruction and practice in both job-built.

#### AP C 212 Column Forms (1.5)

1 hour lecture-1 1/2 hours laboratory

**Note:** May be taken 2 times

In this course the forming of poured-in-space columns will be covered, with instruction and practice in both job-built and the proprietary systems, and the shoring and forming of drop heads. Estimating, safety, and rigging of materials will be included. Math and blueprint reading will be covered.

**AP C 213 Beam and Deck Forming (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

This course will introduce the use of various wood and patented forming systems used in the construction of concrete beams and decks. Metal beam forms and capitals will be taught in this class. Layout and builders level skills will be used in this class.

**AP C 214 Basic Commercial Framing (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Provides an introduction to the theory and practice of wall framing. Students start by learning to read floor plans, and then laying out wall locations, plate and detail, as well as openings and structural connections. Construction math and job site safety practices will also be covered.

**AP C 215 Advanced Commercial Framing (1.5)***1 hour lecture-1 ½ hours laboratory***Prerequisite:** A minimum grade of 'C' in AP C 214**Note:** May be taken 2 times

Covers layout, assembly, and erection of both standard and raked walls. Application of bracing, plumbing and aligning walls will be covered, along with construction math, blueprint reading and job site safety practices.

**AP C 216 Commercial Floor Framing (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Covers the layout and construction of both residential and commercial floor framing. The use of building codes and blueprint reading will be covered. Fall protection along with job site safety and construction math will also be covered.

**AP C 217 Basic Stairs (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Stair construction is an integral part of the carpenter's trade. This course presents stair theory, related mathematics, code requirements, and basic layout stringers, treads and risers. Students will layout, cut, and erect a straight-run stair. Blueprint reading and safety will also be covered.

**AP C 218 Advanced Stairs (1.5)***1 hour lecture-1 ½ hours laboratory***Prerequisite:** A minimum grade of 'C' in AP C 217**Note:** May be taken 2 times

Builds upon the concepts presented in Stair Building I. This class will teach students about winders, u-shaped and radius stair building, as well as code requirements and mathematical calculations. Blueprint reading and safety will also be covered.

**AP C 219 Exterior Finish Details (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Teaches students to read blueprints related to building exteriors such as elevations, sections, and schedules. Construction of structural and architectural elements such as balconies, fireplaces, bay windows, columns and pop-outs. Blueprint reading, mathematical calculations and safety will also be covered.

**AP C 221 Basic Roof Framing (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Roof construction is one of the most challenging and satisfying facets of carpentry. Introduces rafter theory and layout. Students will construct a gable roof using conventional and truss methods. Mathematical calculations for various rafter lengths and safety will also be covered.

**AP C 223 Basic Metal Framing (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Introduces the student to the technology of metal framing. Tools and materials will be covered along with floor and wall construction, including openings and

structural connections, and metal truss roof systems. Mathematical calculations for various rafter lengths and safety will also be covered.

**AP C 225 Transit Level/Laser (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Addresses form design, material estimating and problems relative to form construction. Related safety, math and blueprint reading will be covered.

**AP C 226 Bridge Construction (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Provides students with an overview of basic bridge construction. Descriptions for exterior and interior girders, edge forms, bulkheads and hinge forms will be presented. Formwork project will include panel construction, assembly, and hardware installation tasks. Related safety, math and print reading will be covered in the training.

**AP C 227 Stair and Ramp Forming (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Designed to teach the various techniques used to form stairs and ramp structures. Related safety, math and blueprint reading will be covered.

**AP C 228 Stair Trim (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Covers a variety of moldings, installation for interior stairs, blueprint, and finish schedules, math and related safety regulations.

**AP C 229 Cabinet Millwork and Assembly (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Introduction to basic cabinet construction. Blueprint and finish schedules will be covered as well as related safety and math.

**AP C 230 Cabinet Installation (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Installation of base and wall-hung cabinets, scribing techniques, and how to read blueprint and finish schedules. Related safety and math will also be covered.

**AP C 235 Molding and Trim (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Introduction to various moldings and the specific installation techniques of each. Blueprint, finish schedules, related safety and math will also be covered.

**AP C 236 Plastic Laminates (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Introduction to the manufacture and installation of plastic laminates on horizontal and vertical surfaces to include instruction in cutting and scribing. Blueprint, finish schedules, and related safety and math will also be covered.

**AP C 237 Door and Door Frames (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Introduction to doors and door hardware schedules, specifications and manufacturer's catalogs. Fire codes that govern the hardware industry as well as how to identify various door hardware including locksets, closures, hinges, panic hardware and door sweeps etc. Blueprint, finish schedules, and related safety and math will also be covered.

**AP C 239 Door and Door Hardware (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Introduction to the selection and installation of proper hinge and door-closure hardware. Blueprints, finish schedules, and related safety and math will also be covered.

**AP C 245 Commercial Fixtures (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Includes print interpretation and fabrication techniques used in the preparation and installation of commercial store fixtures. An emphasis will be placed on accurate measuring, proper hand and power tool use, and safety. Students will calculate materials to create cut lists, and fabricate, assemble and install wall panel and valance fixtures.

**AP C 246 Showcases and Loose Store Fixtures (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Includes the basic cabinetmaking skills and construction techniques used in the installation of commercial store fixtures. An emphasis will be placed on measuring, hand and power tool use and safety. Students will interpret prints and material bills for the handling, locating and accurate placement of showcase components and loose store fixtures.

**AP C 247 Basic Suspended Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Basic techniques and procedures associated with suspended scaffolds. The terminology and use of scaffold components in a cable suspended configuration will be the focus of this training. Construction practices and safety will be taken into consideration as students erect equipment using project design plans for this cable suspended scaffold.

**AP C 248 Advanced Suspended Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Advanced techniques and procedures required when constructing suspended scaffolds supported by structural members. Students will identify the suitable structural components for this application type. The methods used to determine load bearing capability of structural elements will be presented. The hazards and precautionary techniques associated with safely building this type of suspended platform will be the focus of this training.

**AP C 249 Basic Systems Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Basic techniques and procedures associated with systems scaffold components. Terminology and components unique to this category of equipment will be discussed. Construction practices and safety considerations will be a major focus of the class. Students will identify and erect equipment using the custom configurations for jobsites where this type of scaffold is most frequently utilized.

**AP C 250 Intermediate Systems Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Enhancement of basic system scaffold erecting ability through the application of cantilevered design methods. The variation of standard system construction techniques and procedures necessary to safely erect platforms extending beyond a typical scaffold base arrangement will be covered. Students will apply methods and erect equipment using custom configurations for jobsites where this type of skill is most valuable.

**AP C 251 Advanced Systems Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Advanced techniques and procedures required when constructing scaffolds used in industrial boiler installation or repair applications. Students will identify surface obstacles and unique shapes indicative of this application. Students will apply common solutions for bridging voids and following equipment contours to construct the selected industrial simulated scaffold projects.

**AP C 252 Basic Frame Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Basic techniques and procedures associated with frame scaffold components. The terminology and components unique to this category of equipment will be discussed. Construction practices and safety considerations will be a major focus of the class. Students will identify and erect equipment using basic configurations suitable for jobsites where this type of scaffold is most frequently utilized.

**AP C 253 Intermediate Frame Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Augmentation of basic frame scaffold erecting ability through the introduction of obstacle and height problem solving skills. The variation of standard construction techniques and procedures necessary to accommodate structural, equipment or overhead restrictions will be provided. A major focus of the class will be construction practices and safety considerations. Students will identify and erect equipment using custom configurations for jobsites where this type of skill is most valuable.

**AP C 254 Advanced Frame Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Advanced techniques and procedures associated with ground supported frame scaffold. Use of scaffold components for construction of various heavy-duty (industrial) elevated platforms will be the focus of this training. Safety precautions, building procedures and material utilization will be incorporated into the assigned tasks. Students will erect heavy-duty large scale platform scaffolds using project plans and designs for this industrial scaffold application.

**AP C 255 Basic Tube and Clamp Scaffold (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Basic techniques and procedures associated with tube and clamp scaffold components and erection methods. The terminology and components unique to this category of equipment will be discussed. Construction practices and safety considerations will be a major focus of the class. Students will identify and erect equipment using the custom configurations for jobsites where this type of scaffold is most frequently utilized.

**AP C 256 Scaffold in Confined Spaces (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Instruction in safe access, entry and monitoring methods for confined space. Both CAL-OSHA and Federal OSHA regulation are covered in detail. The importance of a respirator fit test and respiratory protection training are covered in this course.

**AP C 257 Specialty Scaffold Applications (1.5)***1 hour lecture-1 ½ hours laboratory***Note:** May be taken 2 times

Specialty scaffold applications focusing on ramps, chutes, and mobile towers suitable for light and heavy duty use. Students will identify the characteristics of commercial and industrial scaffold construction. The selected projects for this class 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 ½ hours laboratory***Note:** May be taken 2 times

Presents modified principles and techniques for the use of shoring equipment in a re-shore application. The importance of uniform loading and alignment of tower/tandem tower configurations will be explained. 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 ½ 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 ½ 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 ½ 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 ½ hours laboratory*  
**Note:** May be taken 2 times  
 Uses floor plans and drawing elevations at an intermediate level to enhance basic stair construction skill development. Students will interpret prints to complete job planning, project layout, and material cut list for "L" shaped stair designs. Stair calculations will determine the number of stairs, landing height, stair thread and riser dimensions.

**AP C 263 Advanced Roof Framing (1.5)**  
*1 hour lecture- 1 ½ 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 ½ 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 ½ 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 ½ 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 ½ 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 ½ 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 ½ 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
<b>Electives (Select 3 courses)</b>	
AP DL/AP PL/ AP AC 204 Advanced Printreading	1.5
AP DL 211 Light Gage - L.A. City Certificate	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 Firestopping Procedures	1.5
AP DL 217 Free-Form Lathing	1.5
AP DL 218 Machine Taping	1.5
AP DL 219 Hand Taping	1.5
AP DL 220 Gypsum Board Application and Finish Trim	1.5
AP DL 221 Advanced Hand Tool Finishing	1.5
AP DL 222 Advanced Machine Tool Finishing	1.5
AP DL 223 Advanced Lathing	1.5