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 and/or 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 - 1½ 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*
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 AC 202 Safety and Health Certifications (1.5)
1 hour lecture - 1½ hours laboratory
Note: *Cross listed as AP DL 202/AP PL 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 AC 203 Printreading (1.5)
1 hour lecture - 1½ hours laboratory
Note: *Cross listed as AP DL 203/AP PL 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 AC 204 Advanced Printreading (1.5)
1 hour lecture - 1½ hours laboratory
Prerequisite: *A minimum grade of 'C' in AP AC 203/AP DL 203*
Note: *Cross listed as AP DL 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 AC 205 Acoustical Ceilings (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Instruction in acoustical ceilings, seismic codes and the theory behind them. Wall molds and trims, ceiling layout and material identification. Students will install ceilings using the technical knowledge and skills.

AP AC 206 Standard Acoustical Grids (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Designed with classroom instruction but will focus more on acoustical grid installation such as 2 x 4 and 2 x 2 flat AH@ pattern, radius, gable and diagonal ceilings.

AP AC 207 Suspended Ceilings (1.5)
1 hour lecture - 1½ 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Provides the student with more advanced knowledge and skill in the acoustical industry. Class will focus on square and slant faced, tapered, concealed, drywall suspension and sloped soffits.

AP AC 209 Prefab/Sound Panels (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Focuses 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.

AP AC 210 Concealed/Glue-Up/Staple-Up System (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Designed to show concealed and semi-concealed ceilings and soffits, glue-up and staple-up. Both technical knowledge and skills will be used in assembling these ceilings.

AP AC 211 Compasso (1.5)
1 hour lecture - 1½ 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Focuses on the technical knowledge and skills needed to work with these "high end" products.

AP AC 213 Advanced Acoustical Installation (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Identifies the materials and methods used for the advanced installation of acoustical ceilings. Installation for custom and intricate grid systems will be discussed. Green building rating systems will be applied to selected acoustical materials. Students will use the skills presented to complete a complex acoustical ceiling project as part of this course.

AP AC 214 Advanced Acoustical Layout (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Explains the advanced layout methods used to complete complex acoustical system installations. Seismic codes and requirements are also reviewed. Layout techniques for establishing intricate geometric designs for ceiling grids will be discussed and practiced. Students will use the skills presented to complete selected multifaceted acoustical ceiling layout projects as part of this course.

AP AC 215 Drywall Acoustical Ceilings (1.5)
1 hour lecture - 1½ 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.

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
TOTAL UNITS		**40**

COURSE OFFERINGS

AP C 197 Carpentry Topics (.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 Carpentry. See Class Schedule for specific topic offered. Course title will designate subject covered.

AP C 201 Orientation (1.5)
1 hour lecture - 1½ 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 - 1½ hours laboratory
Prerequisite: *A minimum grade of 'C' in AP C 201*
Note: *May be taken 2 times*
Covers the safe and appropriate use of scaffolds, aerial lift equipment, and emergency response procedures. Successful students will receive UBC Scaffold Erector and Aerial Lift Operator qualification cards. First Aid and CPR certification will be issued upon successful completion of the American Red Cross training provided.

AP C 203 Printreading (1.5)
1 hour lecture - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 207 Tilt-Up Panel Construction (1.5)
1 hour lecture - 1½ 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Introduces the basic techniques of poured-in-place concrete wood form construction. Related safety, math and blueprint reading will be covered.

AP C 209 Gang Forms/Columns (1.5)
1 hour lecture - 1½ 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

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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 - 1½ hours laboratory
Note: *May be taken 2 times*
Covers the basic knowledge required to use blueprints for the purpose of properly laying out, locating, "leveling," "plumbing," "squaring" and preparing patented forming systems for concrete work/pours. Poured in place, tilt-up and precast above grade level structural concrete work including structural "load bearing" walls, decks and columns.

AP C 211 Architectural Concrete (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Covers the basic knowledge required to use blueprints for the purpose of properly laying out and locating "form face" detail "trim," and preparing structural wall forms to articulate designed relief, pattern or texture on finished/cured face of poured concrete.

AP C 212 Column Forms (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Presents the formwork types and construction methods for column form installations. Discussions will cover structural significance of column layout, squaring, leveling and plumbing. The course project will include column formwork construction, assembly, and hardware installation tasks. Related safety, math and print-reading will be covered.

AP C 213 Beam and Deck Forming (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Introduction to the use of beam and deck forming systems for concrete construction. Students will identify formwork types and installation techniques including calculating materials and setting beam & deck forms. Metal beam forms and capitals will be highlighted. Layout and builders level skills will be used in this class.

AP C 214 Basic Commercial Framing (1.5)
1 hour lecture - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Covers how various trims are utilized to finish stair construction design features. Product styles, characteristics, applications, and installation methods are included in the discussions. The tools and techniques for cutting and installing selected trim types are presented and practiced throughout the training.

AP C 229 Cabinet Millwork and Assembly (1.5)
1 hour lecture - 1½ 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 - 1½ 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 - 1½ 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Covers manufactured product styles, characteristics, and countertop applications. Materials used as countertop and backsplash substrates are discussed. Construction procedures and installation methods are presented, and students will apply the techniques to produce and install a plastic laminate countertop with backsplash.

AP C 237 Door and Door Frames (1.5)
1 hour lecture - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Includes application of cantilevered design methods used to safely erect platforms extending beyond a typical scaffold base arrangement. Students will apply methods and erect equipment using custom configurations for jobsites.

AP C 251 Advanced Systems Scaffold (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Covers the advanced techniques and procedures required when constructing system scaffolds used in industrial boiler installation or repair applications. 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Covers terminology, components and the basic techniques and procedures associated with frame scaffold components. Construction practices and safety considerations will be a major focus of the class. Students will choose 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Introduction of obstacle and height problem solving into frame scaffold project, to include equipment or overhead restrictions. Students will identify and erect equipment using custom configurations for jobsites.

AP C 254 Advanced Frame Scaffold (1.5)
1 hour lecture - 1½ hours laboratory
Note: *May be taken 2 times*
Covers the advanced techniques and procedures associated with ground supported frame scaffold, in particular the use of scaffold components for construction of various heavy-duty (industrial) elevated platforms. 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 - 1½ hours laboratory
Note: *May be taken 2 times*
Covers the basic techniques and procedures associated with tube and clamp scaffold components and erection methods. Construction practices and safety considerations will be a major focus of the class. Students will learn to choose and erect equipment using custom configurations for jobsites.

AP C 256 Scaffold in Confined Spaces (1.5)
1 hour lecture - 1½ 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.

To satisfy a prerequisite, the student must have earned a letter grade of A, B, C or CR in the prerequisite course, unless otherwise stated.
See Catalog addendum at http://www.palomar.edu/catalog/2011/ for updates and new program approvals.

AP C 257 Specialty Scaffold Applications (1.5)
1 hour lecture - 1½ 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 - 1½ 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 muti-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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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 - 1½ 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