

AP IW 719 Welding (2)

1½ hours lecture - 1½ hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706

Note: May be taken 2 times

Basic understanding of cutting torch and electrical resistance welding principles and techniques. Covers safe storage, transportation, and use of acetylene, oxygen, and chemelene (MAPP) gases for cutting, as well as "stick" and wire-feed welding safety and technique. Upon completion of the course students will be able to weld in vertical, overhead and horizontal positions.

AP IW 720 Instructional Leadership I (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706

Note: May be taken 2 times

Study of technical course development and delivery techniques for the electrical trade, utilizing classroom-proven techniques. The student will familiarize him/herself with classroom management, testing and assessment techniques, curriculum development and material presentation based on industry-standard and college level instructional methodologies.

AP IW 721 Programmable Logic Controllers (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706 and AP IW 709

Note: May be taken 2 times

Provides an in-depth study of programmable logic controllers (PLC) while examining standard programming languages and common PLC hardware applications. This course focuses on the underlying principles of PLCs and provides practical information on installing, programming, maintaining, and troubleshooting PLCs.

AP IW 722 Fire/Life Safety Systems (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706

Note: May be taken 2 times

Introduces students to the code requirements, design concepts, and installation techniques required for an efficiently installed and properly working fire alarm system. Includes an overview of NFPA 70 (NEC) – 2002 edition as it applies to Fire Alarm, an introduction to NFPA 72 – 1999 edition National Fire Alarm Code with overview of Chapters I through 9, including Appendix A.

AP IW 723 Instrumentation (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706

Note: May be taken 2 times

Provides students with a more advanced understanding of instrumentation and control, covering temperature, pressure, flow, and level detection (process control) systems; their principles of operation, and strategies for installation, maintenance, and troubleshooting of these systems.

AP IW 724 Instructional Leadership II (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706

Note: May be taken 2 times

Study of technical course development and delivery techniques for the electrical trade, utilizing classroom-proven techniques. The student will familiarize him/herself with classroom management, testing and assessment techniques, curriculum development and material presentation based on industry-standard and college level instructional methodologies.

AP IW 725 Building Automation Systems (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706

Note: May be taken 2 times

Covers the technologies and installation requirements for Building Automation Systems (BAS.) The subjects presented in this course are Building Automation applications and requirements used in the construction of commercial and industrial buildings.

AP IW 726 Electrical Construction Practices (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in AP IW 706

Note: May be taken 2 times

The technologies and skill sets required for installing and provisioning the electrical requirements for commercial or industrial facilities. The topics presented in this course include electrical distribution overview, safety, OSHA requirements, shoring, trenching, Sempa Service Guide requirements, rigging, IEEE Standards, Blueprints, CSI Master Format construction specifications and National Electrical requirements for electrical services and distribution systems.

AP IW 797 Inside Wireman Topics (2 - 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 Inside Wireman. See Class Schedule for the specific topic offered. Course title will designate subject covered.

Plasterer (AP PL)

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.S. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

| Program Requirements | Units |
|--|-------------|
| AP DL/AP PL/ AP AC 701 Orientation | 1.5 |
| AP DL/AP PL/ AP AC 702 Safety and Health Certifications | 1.5 |
| AP DL/AP PL/ AP AC 703 Printreading | 1.5 |
| AP DL/ AP PL 705 Basic Lathing | 1.5 |
| AP PL 706 Basic Plastering | 1.5 |
| AP PL 707 Exterior Plastering | 1.5 |
| AP PL 708 DOT and Screed Techniques | 1.5 |
| AP PL 709 Interior Plastering | 1.5 |
| AP PL 710 Finish Applications | 1.5 |
| AP PL 711 Ornamental Plastering | 1.5 |
| AP PL 713 Theme Plastering | 1.5 |
| AP DL/ AP PL 715 Exterior Insulation Finish Systems (EIFS) | 1.5 |
| AP DL/ AP PL 716 Firestop/Fireproofing Procedures | 1.5 |
| AP PL 717 Plastering Equipment Application | 1.5 |
| AP PL 718 Plastering Equipment | 1.5 |
| AP WE 714 Plasterer Work Experience | 16 |
| TOTAL UNITS | 38.5 |

COURSE OFFERINGS

AP PL 701 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 701/AP AC 701; may be taken 2 times

An introduction to the Interior Systems program. 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 PL 702 Safety and Health Certifications (1.5)
1 hour lecture - 1½ hours laboratory
Note: Cross listed as AP DL 702/ AP AC 702; may be taken 2 times
 Instruction in safety and health training that meets the needs of the Interior Systems industry. Content includes certification in Power Industrial Trucks, Aerial Lift, American Red Cross First Aid / CPR/ AED, and OSHA 10.

AP PL 703 Printreading (1.5)
1 hour lecture - 1½ hours laboratory
Note: Cross listed as AP DL 703/ AP AC 703; may be taken 2 times
 An introduction to the basic visualization skills needed for reading and interpreting construction prints. Demonstration of the significance of views, elevations and the role of specifications as they relate to prints.

AP PL 705 Basic Lathing (1.5)
1 hour lecture - 1½ hours laboratory
Note: Cross listed as AP DL 705; 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 PL 706 Basic Plastering (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 This course provides a brief history of plastering and a complete picture of what the plastering industry is like today. The importance of good lathing and proper inspection of lathing will be emphasized. Proper hawk and trowel and basic tool use will be demonstrated.

AP PL 707 Exterior Plastering (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 An introduction to Portland Cement Plaster (a.k.a. stucco) and the processes involved in completing a plastering job. This course will stress the importance of good workmanship and adherence to proven methods of work. Students will begin to develop mastery of basic plastering tools in this course.

AP PL 708 DOT and Screed Techniques (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 This course is designed to teach the importance of plumb and square projects. The students will use 3-4-5 or center line methods to square the project, establish control lines and wall finish lines. The plumbing of the project will be demonstrated through the dotting and screeding portion of instruction. The student will brown up and finish a project using methods of application previously covered.

AP PL 709 Interior Plastering (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 An introduction to modern gypsum interior plastering systems. Proper methods of application, proper proportioning and mixing, and good workmanship will be demonstrated in this course.

AP PL 710 Finish Applications (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 The course will emphasize three different types of molds, their use and application. Components and production of a mold, how to horse a mold and create inside and outside miters will also be covered.

AP PL 711 Ornamental Plastering (1.5)
1 hour lecture - 1½ hours laboratory
Prerequisite: A minimum grade of 'C' in AP PL 210
Note: May be taken 2 times
 This course is designed to provide instruction and practice in advanced geometric lay out problems. Class project will guide students through each phase of production to produce an elliptical arch, with keystone at the arch apex. The project will introduce students to benching a mold, setting and pointing staff, building a working trammel and successfully running a trammel mold.

AP PL 713 Theme Plastering (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 This course is designed to teach the student the basic knowledge and skills required to successfully plan and execute a simple project that requires the use of manufactured rock. A study of real rock formations and the techniques used to copy them will be covered as well as painting and highlighting, required tools, art lay out, and carving techniques.

AP PL 715 Exterior Insulation Finish Systems (EIFS) (1.5)
1 hour lecture - 1½ hours laboratory
Note: Cross listed as AP DL 715; 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 PL 716 Firestop/Fireproofing Procedures (1.5)
1 hour lecture - 1½ hours laboratory
Note: Cross listed as AP DL 716; 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 PL 717 Plastering Equipment Application (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 Instruction in the materials, application methods and techniques for operating a plaster pump. Students will complete a three-coat work application to industry standards. Emphasis on proper pump set-up, washout and maintenance.

AP PL 718 Plastering Equipment (1.5)
1 hour lecture - 1½ hours laboratory
Note: May be taken 2 times
 Terminology, components and operating procedures for plastering equipment and machinery. Machine maintenance, safety, troubleshooting procedures, limits of operation and communication practices will be covered. Students will inspect and properly set up and clean a plastering pump.

AP PL 797 Plasterer 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 Plasterer. See Class Schedule for specific topic offered. Course title will designate subject covered.

Residential Wireman (AP RW)

A three-year apprenticeship program. Applicants for San Diego/Imperial counties should apply to the San Diego Electrical Training Trust, 4675 Viewridge Avenue, Suite D, San Diego, CA 92123. Telephone: (858) 569-6633, ext. 111.

A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

| Program Requirements | | Units |
|----------------------|---|-----------|
| AP RW 701 | Introduction to Residential Wiring Concepts | 4 |
| AP RW 702 | Electrical Theory, Practice & Blueprint Reading | 4 |
| AP RW 703 | AC/DC Electrical Theory and Applications | 4 |
| AP RW 704 | Residential Certification Preparation | 4 |
| AP RW 705 | Home Technology Integrator I | 4 |
| AP RW 706 | Home Technology Integrator II | 4 |
| AP WE 713 | Electrician Work Experience | 16 |
| TOTAL UNITS | | 40 |