

Course Descriptions

oral presentation, or other options as approved by instructor. May be repeated for a maximum of six credits.

APPR—APPRENTICE

APPR 1110
Sheet Metal 1A
6:6:0 F

Completers will obtain American Red Cross CPR/ First Aid Certification. Introduces Sheet Metal trade and its history. Teaches the safe operation of hand and power sheet metal tools and machinery. Covers basic drafting and layout techniques, and construct sheet metal seams to blueprint specification.

APPR 1120
Sheet Metal 1B
6:6:0 Sp

Introduces parallel line, radial line, and triangulation layout methods. Addresses layout and fabrication of basic sheet metal duct system fitting to blueprint specifications. Introduces field installation practices, emergency procedures, and hazardous communication.

APPR 1210
Sheet Metal 2A
6:6:0 F

• Prerequisite(s): APPR 1120
Teaches the basics of bidding jobs and job costing, making pictorial drawings and free hand sketches. Features building intermediate duct system fittings to blueprint specifications. Introduces architectural sheet metal work and roof drainage systems.

APPR 1220
Sheet Metal 2B
6:6:0 Sp

Teaches construction and installation of louvers and ventilators, selection and installation of duct hangers and anchor, selection and installation of fire and smoke dampers and introduction to computer operations.

APPR 1300
Apprentice Math
3:3:0 F, Sp

For apprentices. Covers math used in apprentice trades. Teaches fractions, decimals, percents, interest, volume and metrics. Studies special trade formulas.

APPR 1410
Plumbing Independent 1A
5:5:0 F

For plumbing apprentices. Introduces plumbing definitions, Uniform Plumbing Code chapters 1, 2 and 3, mathematics for plumbers. Studies installation practices and IAPMO standards, related science, pipe threading, and mechanical piping systems.

APPR 1420
Plumbing Independent 1B
5:5:0 Sp

• Prerequisite(s): APPR 1410
For plumbing apprentices. Covers Uniform Plumbing Code as it relates to fixtures, faucets, valves, overflows, strainers, connections, floor drains, whirlpool bathtubs, cast-iron soil, drainage, glass,

clay and concrete pipe. Studies basic emergency and first aid, solder and brazed joint, copper pipe, caked joint, mathematics units 7-16 and blue print reading.

APPR 1430
Plumbing Independent 2A
5:5:0 F

• Prerequisite(s): APPR 1420
For plumbing apprentices. Covers Uniform Plumbing Code chapters 5 and 6, Appendix A-recommended rules for sizing water supply system, mathematics and backflow prevention.

APPR 1440
Plumbing Independent 2B
5:5:0 Sp

• Prerequisite(s): APPR 1430
For plumbing apprentices. Covers blue print reading for plumbers units 11-34, Uniform Plumbing Code chapters 7, 8, and 9, plumbing safety NAPHCC lessons 27A, 97-104.

APPR 1450
Plumbing Independent 3A
5:5:0 F

• Prerequisite(s): APPR 1440
For plumbing apprentices. Covers plumbing mathematics, Uniform Plumbing Code Illustrated Training Manual chapters 4 and 10, Appendix C-minimum plumbing facilities, review of Uniform Plumbing Code chapter 3 and flex supply hoses.

APPR 1460
Plumbing Independent 3B
5:5:0 Sp

• Prerequisite(s): APPR 1450
For plumbing apprentices. Covers Uniform Plumbing Code chapters 5, 6, 8, 12, Appendix B, and Appendix H. Studies gas piping and appliances, good practices for gas piping and appliances, and mathematics.

APPR 1470
Plumbing Independent 4A
5:5:0 F

• Prerequisite(s): APPR 1460
For plumbing apprentices. Covers plumbing math review, installation practices, Uniform Plumbing Code chapters 6, 7, 8, 10, Appendices D and H. Studies heating systems, hydraulic theory, pump systems, brazing, soldering, PVC pipe and pipe dies.

APPR 1480
Plumbing Independent 4B
5:5:0 Sp

• Prerequisite(s): APPR 1470
For plumbing apprentices. Covers blue print reading, PVC pipe and copper joining techniques, and review and preparation for state license exam.

APPR 1800
Carpenter Apprentice 1A
5:5:0 F

• Prerequisite(s): Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers first aid, CPR, Safety and OSHA requirements. Teaches use of hand tools, power tools, materials, tool safety, rigging, knots, hand signals and math. Introduces Building layout and forms.

APPR 1810
Carpenter Apprentice 1B
5:5:0 Sp

• Prerequisite(s): APPR 1800 or Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers layout, framing, roots, canopies, sound control, temperature control, insulation and math. Teaches finish for exteriors and interiors.

APPR 1820
Carpenter Apprentice 2A
5:5:0 F

• Prerequisite(s): APPR 1810 or Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers exterior/interior finish, interior systems, metal framing, drywall, partitions, ceilings, tools.

APPR 1830
Carpenter Apprentice 2B
5:5:0 Sp

• Prerequisite(s): APPR 1820 or Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers forms, pile caps, form hardware, tilt up and precast.

APPR 1840
Carpenter Apprentice 3A
5:5:0 F

• Prerequisite(s): APPR 1830 or Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers blueprints, elevation, symbols, detail drawing and math. Introduces CAD, print reading and drafting.

APPR 1850
Carpenter Apprentice 3B
5:5:0 Sp

• Prerequisite(s): APPR 1840 or Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers welding safety and principles, cutting and burning. Teaches flat, vertical, overhead and light gauge. Introduces blueprint reading and drafting.

APPR 1860
Carpenter Apprentice 4A
5:5:0 F

• Prerequisite(s): APPR 1850 or Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers scheduling, MSDS, leadership skills, concrete testing, computer keyboard, trade tips and scaffold safety.

APPR 1870
Carpenter Apprentice 4B
5:5:0 Sp

• Prerequisite(s): APPR 1860 or Departmental Written Approval
For members of the Carpenters Joint Apprenticeship Training Committee. Covers MSHA, clean rooms, comet, foundations, heavy construction and highway.

APPR 2310
Sheet Metal 3A
 6:6:0 F
 • Prerequisite(s): APPR 1220
 Teaches the properties of air as in heating, ventilating, and cooling system applications, specifications, and review of contract documents, selections and installation of fans, duct system designs.

APPR 2320
Sheet Metal 3B
 6:6:0 Sp
 Teaches structural, mechanical, and electrical blueprint interpretation. Introduces the uses of CAD in the sheet metal industry. Teaches proper hoisting and rigging methods, beginning field measuring, and sign work.

APPR 2410
Sheet Metal 4A
 6:6:0 F
 • Prerequisite(s): APPR 2320
 Uses advance mathematics to design and layout duct systems. Teaches specialized power equipment used in the shop and in the field. Incorporates advanced layout techniques to layout and fabricate sheet metal duct fittings.

APPR 2420
Sheet Metal 4B
 6:6:0 Sp
 Teaches methods to layout and install metal ceilings and boiler breaching, construction of metal buildings and installation of skylights, basic air conditioning properties and duct sizing, and determination of the air quality in a building.

APPR 281R
Cooperative Work Experience
 1 to 8:0:5 to 40 On Sufficient Demand
 • Corequisite(s): APPR 285R
 Designed for electrical construction apprentice majors. Provides paid, on-the-job work experience in the student's major. Work experience, the correlated class and enrollment are coordinated by the Cooperative Coordinator. Includes student, employer and coordinator evaluations, on-site work visits, written assignments and oral presentations. Provides experience in writing and completing individualized work objectives that improve present work performance.

APPR 285R
Cooperative Correlated Class
 1:1:0 On Sufficient Demand
 • Corequisite(s): APPR 281R
 Designed for electrical construction apprentice majors. Identifies on-the-job problems and provides remediation of those problems through in-class discussion and study. Includes the study of identifying and maximizing service opportunities. Students register for this class with approval of the Cooperative Coordinator. Includes lecture, guest speakers, video tapes, role playing, case analysis, oral presentation and written assignments. Completers should be better able to perform in their field of work or study.

ARCH—ARCHAEOLOGY

ARCH 1100 SS
Introduction to Archaeology
 3:3:0 F, Sp
 Studies the archeological record of human behavior for the last two million years. Examines the scientific techniques used to explore and analyze the record. Investigates the ways in which our ancestors lived and the ways in which the present and future world is affected by the past. Includes field trips, films and research methods.

ART—ART

ART 1000
Color Theory
 3:3:0 F, Sp
 Covers theories of color, color systems, social and psychological impact of color, and the effects of colors on humankind. Assignments demonstrate the application of color theories.

ART 1010 FF
Introduction to Visual Arts
 3:3:0 Su, F, Sp
 Develops an appreciation of art. Studies elements and principles of art. Includes identification of major art forms, surveys art history, art criticism, and media. Satisfies a fine arts requirement. Community members are welcome.

ART 1050 FF
Photography I
 3:2:4 Su, F, Sp
 Emphasizes the use of camera operation, including aperture and shutter speed adjustments to control exposure, depth of field, lenses, camera format. Teaches how to see photographically, using elements of composition and lighting to make stronger images. Teaches basic black and white film and printing processes. Requires a 35mm manual mode camera, as well as film and paper. Community members welcome.

ART 1110 FF
Drawing I
 3:2:2 Su, F, Sp
 For majors and non-majors. Introduces fundamental drawing concepts and media. Emphasizes mastery of basic drawing principles and integration of these principles into a personal drawing style through exposure to a variety of structured drawing experiences. Requires sketchbook, in-class and home work assignments.

ART 1120
2D Design
 3:3:0 Su, F, Sp
 Core course for all AVC majors. Introduces the elements and principles of design. Studies two and three dimensional formats as they relate to a series of different design problems. Uses principles such as line, shape, rhythm, contour, value, and contrast in creative assignments.

ART 1130
3 D Design
 3:2:2 F, Sp
 • Prerequisite(s): ART 1120
 Presents a survey of the history and main lines

of development and influential factors in three dimensional designs. Examines important designers, firms, and decisive turning points in the history of three dimensional designs. Emphasizes planning, purpose, and function through project oriented assignments. Teaches proper use of tools and materials.

ART 1280
Airbrush Basics
 3:2:2 On Sufficient Demand
 Studies basic airbrush techniques, tools and materials. Develops masking and painting skills for a wide variety of textures and effects. Includes lectures, demonstrations, and labs. Students must provide airbrush (any model) and materials.

ART 1340 FF
Sculpture I
 3:2:2 F, Sp
 Introduces methods and techniques of figurative clay sculpture. Students will construct armatures and build clay head and anatomy studies from the model. Includes firing and finishing techniques. Community members welcome.

ART 1350 FF
Ceramics I
 3:2:2 Su, F, Sp
 Studies clay as an expressive medium. Emphasizes techniques of working with clay, including hand building, wheel throwing, glazing, and firing. Community members welcome.

ART 1360
Crafts Methods and Materials
 3:2:2 On Sufficient Demand
 • Prerequisite(s): ART 1120
 Emphasizes design skills used in craft media including glass, metal, wood, fibers, and composites. Covers use and safe practices for both hand and power tools. Includes historical and cultural derivation of designs and art works, through critical analysis, aesthetic import and production techniques. Community members welcome.

ART 1400
Graphic Computer Applications
 3:2:2 Su, F, Sp
 Introduces concepts and software related to visual communication and the creation and reproduction of art. Teaches how to create and modify digital images using Adobe Photoshop. Also teaches basic design skills using Adobe Illustrator. Teaches basic page layout skills using InDesign. Covers basic software used in visual communications.

ART 1410
Typography and Layout I
 3:2:2 F, Sp
 • Prerequisite(s): ART 1120, ART 1400
 Teaches the principles of typographic design and communication, type selection, and type terminology. Addresses typographic history and the use of typography in modern design including its relationship to layout and grid structure. Teaches skills to allow students to professionally set type using industry standard software.

ART 1430
Digital Prepress
 3:2:2 F, Sp
 • Prerequisite(s): ART 1400
 Introduces production techniques used in the