VOCATIONAL (VOC)

VOC ADJ01 The Administrative Justice System
0 Units
(May be taken for Pass/No Pass only)
Lecture: 54

History and philosophy of the justice system, subsystems, roles, relationships and theories of crime causation and correction.

VOC ADJ02 Principles and Procedures of the Justice System
0 Units
(May be taken for Pass/No Pass only)
Lecture: 54

Due process in criminal proceedings from pre-arrest through trial and appeal using statutory law and legal precedent.

VOC AGG01 Food Production, Land use & Politics-a Global Perspective
0 Units
Lecture: 54

Surveys the world s food producing systems in terms of economic, political and cultural forces. Emphasizes ethical, sustainable food producing agriculture.

VOC AGR-G Home Gardening
0 Units
Lecture: 54

Organic and traditional gardening, plants, and fruit orchards. Includes design, propagation methods, pruning, fertilizing, and pest control.

VOC AGR01 Horticultural Science
0 Units
Lecture: 54

Horticulture skills and techniques for use in gardening, nursery, and landscape applications. Emphasis on propagation, cultural practices, and the study of plant relationships, structure, growth and development Off-campus meetings required.

VOC AGR02 Plant Propagation/Greenhouse Management
0 Units
Lecture: 36 Lab: 54

Plant propagation and production practices with emphasis on florists' plants, woody ornamentals, and fruits. Commercial techniques include seed propagation, cuttings, grafting and budding, layering, fern sporing, and division. Stresses greenhouses and other environmental structures for plant propagation and production.

VOC AGR05 Park Facilities
0 Units
Lecture: 54

Management and operation of different types of park facilities. Includes the management of sports fields, recreation centers, campgrounds, aquatic facilities, and golf courses.

VOC AGR13 Landscape Design
0 Units
Lecture: 36 Lab: 54

Landscape design for residential and small commercial sites including the design process, drafting, graphics, site evaluation, landscaping materials, and plant usage. Field trips and off-campus assignments are required.

VOC AGR15 Interior Landscaping
0 Units
Lecture: 54

Design, installation, and maintenance practices used in interior landscaping. Includes identification, culture, and care of plants suitable for interior use.

VOC AGR24 Integrated Pest Management
0 Units
Lecture: 36 Lab: 54

Common agricultural pests in Southern California and physical, biological, and chemical pest control principles and practices, including integrated pest management (IPM). Stresses use, safety, equipment, laws, and regulations of pesticides. Field trips are required.

VOC AGR25 Floral Design 1
0 Units
Lecture: 24 Lab: 44

Principles of floral design: form, style, and composition. Includes designing of floral arrangements, wreaths, sprays, baskets, bouquets, wedding flowers, and corsages.

VOC AGR26 Floral Design 2
0 Units
Lecture: 24 Lab: 44

Contemporary floral design theory emphasizing creativity, self-expression, and professional design situations.

VOC AGR27 Floral Design 3
0 Units
Lecture: 24 Lab: 44

Advanced principles of floral design and florist operations management. Includes designs and operations related to holidays, parties, weddings, and sympathy.

VOC AGR29 Ornamental Plants - Herbaceous
0 Units
Lecture: 36 Lab: 54

Identification, growth habits, culture, and ornamental use of landscape annuals, biennials, perennials, ferns, indoor plants, groundcovers, and vines adapted to climates of California. Plants emphasized will come from the California Association of Nurseries and Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) certification test plant lists. Off campus meetings required.

VOC AGR30 Ornamental Plants - Trees and Woody Shrubs
0 Units
Lecture: 36 Lab: 54

Identification, growth habits, culture, and ornamental use of landscape trees and shrubs adapted to climates of California. Plants emphasized will come from the California Association of Nurseries and Garden Centers (CANGC) and California Landscape Contractors Association (CLCA) certification test plant lists. Off campus meetings required.

VOC AGR32 Landscaping and Nursery Management
0 Units
Lecture: 36 Lab: 54

Operation and management of wholesale and retail nurseries. Includes site location and layout of areas, greenhouse management, soil mixes, proper use of fertilizers, insecticides, fungicides, herbicides, growth regulators, irrigation, mechanization, financing, personnel management, retail displays, advertising, customer relationships, federal, state, and local laws and regulations. Field trips are required.

VOC AGR39 Turf Grass Production and Management
0 Units
Lecture: 36 Lab: 54

Introduction to cultivation, maintenance, and management of turfgrasses utilized for athletic fields, golf courses, parks, cemeteries, and commercial and residential lawns. Identification, installation, cultural requirements, and maintenance practices are emphasized. Field trips required.

VOC AGR40 Sports Turf Management
0 Units
Lecture: 36 Lab: 54

Prepares students to work in the sports turf industry. Emphasizes turf cultural techniques used in sports turf management. Includes turf surfaces used on baseball, football, soccer, tennis, golf courses, driving ranges, and other sports fields in both professional and amateur sports. Field trips required.

VOC AGR50 Soil Science and Management
0 Units
Lecture: 36 Lab: 54

Principles of soil management, including management of air, water, nutrients, organic matter. Study of soil including physical, chemical, and biological properties, classification, derivation, use, function, and management including erosion, moisture, retention, structure, cultivation, organic matter, and microbiology as they pertain to optimized plant, growth. Laboratory topics include soil type, classification, soil reaction, soil fertility, and physical properties of soil. Laboratory required. Field trips are required.

VOC AGR51 Tractor and Landscape Equipment Operations
0 Units
Lecture: 36 Lab: 54

Selection, operation, repair, and maintenance of power equipment used in the agriculture and landscape industry. Includes two- and four-wheel drive tractors, skip loaders, skid steer loaders, backhoes, lawnmowers, edgers, weed eaters, blower vacuums, rototillers, chainsaws, spraying equipment, and all-terrain vehicles. Laboratory includes use of this equipment.

VOC AGR52 Hydraulics
0 Units
Lecture: 36 Lab: 54

Operation, maintenance, and repair of hydraulic systems used on agriculture and industrial equipment.

VOC AGR53 Small Engine Repair 1
0 Units
Lecture: 36 Lab: 54

Principles and repair of small engines used in landscape, industrial and agricultural applications. Includes repair of lawnmowers, chainsaws, 2-cycle engines, 4-cycle engines, spraying equipment, all-terrain vehicles, and other related gas-powered equipment.

VOC AGR55 Diesel Engine Repair
0 Units
Lecture: 36 Lab: 54

Repair and maintenance of diesel engines used to power industrial, landscape and agricultural equipment. Includes hands-on experience maintaining, servicing, and repairing diesel engines.

VOC AGR56 Engine Diagnostics
0 Units
Lecture: 36 Lab: 54

Analysis and evaluation of tractor engine power failures with hands-on experience in the proper diagnostic procedures of power equipment. Includes service, maintenance and repair of tractor electrical systems: electrical wiring, voltage regulators, generators, alternators, switches, gauges, batteries, and test equipment. Field trips are required.

VOC AGR57 Power Train Repair
0 Units
Lecture: 36 Lab: 54

Service, maintenance, and repair of power trains. Includes hands-on experience with clutches, transmissions, differentials, power take-off units, and final drives used to transmit power on tractors and other outdoor power equipment. Field trips are required.

VOC AGR62 Irrigation Principles and Design
0 Units
Lecture: 36 Lab: 54

Principles of irrigation, design techniques, sprinkler system components, and hydraulic principles used in nursery management, interior design, residential, and commercial landscapes. Special emphasis is given to water conservation. Field trips are required.

VOC AGR63 Irrigation Systems Management
0 Units
Lecture: 36 Lab: 54

Systematic approach to water conservation in landscapes. Soil-plant-water relationships, evapotranspiration, irrigation schedules, salinity and drainage, and irrigation efficiency. Water measurement, soil moisture measurement, irrigation systems, and practical constraints affecting scheduling. California water supply issues. Irrigation efficiency testing will be incorporated to demonstrate proper methods of water audits and system evaluation. Field trips are required.

VOC AGR64 Irrigation - Drip and Low Volume
0 Units
Lecture: 36 Lab: 54

Conservation of water in landscapes by utilization of drip and low-flow irrigation practices. Design, installation techniques, operation, and maintenance of drip and low-flow irrigation systems, including determination of irrigation requirements, selection of emitters and low-flow devices, and uniformity of water distribution. Includes hands-on experience in design and installation techniques. Field trips are required.

VOC AGR71 Construction Fundamentals
0 Units
Lecture: 36 Lab: 54

Construction techniques and tools used in landscaping with construction projects that include surveying techniques, utilities (gas, water, and electricity), woodworking, and masonry.

VOC AGR72 Landscape Hardscape Applications
0 Units
Lecture: 36 Lab: 54

Landscape construction pertaining to hardscape featured in the landscape. Estimation and installation of fences, walks, planters, patios, lighting, barbecues, gazebos, decks, ponds, spas, fountains, and pools. Students will gain hands-on experience in the laboratory activities.

VOC AGR73 Landscaping Laws, Contracting, and Estimating
0 Units
Lecture: 54

Landscape laws, contracting and estimating as they pertain to landscape construction. Information covered will be helpful for the Landscape Contractor's (C-27 classification) licensing exam administered by the State of California. Off campus assignments required.

VOC AGR75 Urban Arboriculture
0 Units
Lecture: 36 Lab: 54

Care and management of ornamental trees. Includes pruning techniques, fruit tree care, bracing, cabling, and pest control. Safe practices in the use of equipment including the use of ropes, chippers, boom trucks, chain saws, and identification and evaluation of common trees. Prepares students for the tree worker and arborist certification (ISA) exams.

VOC ANA50 Basic Anatomy and Physiology
0 Units
Lecture: 60-180

Introduction to human anatomy and physiology by systems with brief descriptions of biochemistry, cell biology, and molecular biology. Upon completion, students will understand normal functions and be able to recognize pathologies.

VOC AR101 Design 1 - Elements of Design
0 Units
Lecture: 54 Lab: 54

Design and design process including conceptualization, visualization, form making, presentation, expression, and site analysis of physical, contextual, and cultural aspects of design and the urban environment. Portfolio will be produced. Field trips are required.

VOC AR102 Design 2 - Architectural Design
0 Units
Lecture: 54 Lab: 54

Second level architectural design studio with a focus on site analysis, design conceptualization, form making, program development and presentation. Emphasis is on critical thinking and problem solving integrated with the artistic design process. Investigations will stress symbolic expression, aesthetics, craftsmanship, technical skills, vocabulary and physical object making through the design of multi-family residential, institutional and cultural buildings. Field trips are required.

VOC AR121 CADD and Digital Design Media - Level 1
0 Units
Lecture: 54 Lab: 54

CADD (Computer Aided Design and Drafting) Level 1 and computer application in architecture, engineering and related fields, including spreadsheet, CAD, and presentation application. Field trips required.

VOC AR122 Architectural Presentations
0 Units
Lecture: 54 Lab: 54

Analysis and preparation of architectural presentation projects, including schematic and final design, architectural models, oral presentation techniques, board layouts using hand-drawn and computer-aided techniques, and development of project portfolio. Field trips required.

VOC AR141 Design Drawing and Communication
0 Units
Lecture: 54 Lab: 54

Architectural drawing techniques including graphic standards, scales, orthographic, paraline, and perspective projections. Field trips required.

VOC AR147 Architectural CAD and BIM
0 Units
Lecture: 36 Lab: 71

3-D Computer Aided Design and Drafting (CAD) and Building Information Modeling (BIM)for architectural design and design development. Portfolio of 3-D building models and extracted 2-D drawings will be produced. Field trips required.

VOC AR222 Advanced Digital Design, Illustration and Animation
0 Units
Lecture: 36 Lab: 71

Architectural Computer Aided Design (CAD), 3-Dimensional (3-D) illustration, rendering and animation. Virtual walk-through and fly-through videos of interior and exterior 3-D models with photo-realistic materials and lighting will be produced.

VOC AR247 Architectural CAD Working Drawings
0 Units
Lecture: 36 Lab: 71

Architectural Computer Aided Design (CAD) for design development and working drawings. Portfolio of working drawings using Building Information Modeling (BIM) and CAD applications of integrated 3-D and 2-D BIM/CAD models will be produced. Field trips required.

VOC ASC01 Animal Science
0 Units
Lecture: 54

A scientific approach to the livestock industry encompassing aspects of animal anatomy, physiology, nutrition, genetics, and epidemiology. Emphasis on the origin, characteristics, adaptations, and contributions of livestock to the modern agriculture industry. Field trips may be required.

VOC ASC02 Animal Nutrition
0 Units
Lecture: 54

Composition of feeds and their utilization by domestic animals including digestive physiology, animal assessment, feed appraisal and compiling of rations.

VOC ASC12 Exotic Animal Management
0 Units
Lecture: 54

Care and management of exotic and alternative livestock species with emphasis on identification, health maintenance, handling techniques, nutrition, and reproduction. Includes analysis of industry trends and principal marketing uses of exotic animals.

VOC ASC14 Swine Production
0 Units
Lecture: 36 Lab: 54

Study of the principles and practices in the purebred and commercial pork production industries; emphasis on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing and recordkeeping to ensure scientifically-based management decisions and consumer product acceptance.

VOC ASC16 Horse Production and Management
0 Units
Lecture: 54 Lab: 54

Selection, utilization, and management of the light horse. Emphasis is on evaluation, health care, and handling skills.

VOC ASC17 Sheep Production
0 Units
Lecture: 36 Lab: 54

Survey of the sheep and goat industries; management of commercial, purebred and small farm flocks; selecting, feeding, breeding, and basic care of small ruminants plus marketing of sheep, goats and their products. Laboratory and field trips required.

VOC ASC18 Horse Ranch Management
0 Units
Lecture: 54 Lab: 54

Skills and procedures used in the management of an equine business. Includes business plans and record keeping, staff and financial management, horse care and training, and farm design for a variety of horse operations.

VOC ASC19 Horse Hoof Care
0 Units
Lecture: 18 Lab: 54

Proper horse hoof care; shoeing, trimming, and disease recognition and control.

VOC ASC20 Horse Behavior and Training
0 Units
Lecture: 18 Lab: 54

Breaking and starting horses of all ages. Concentrates on halter training of foals, ground work on yearlings, and green-breaking two-year-olds and up. Includes lunging techniques, driving, and breaking to a saddle. Training in collection, turning, backing, leads, and trailer loading.

VOC ASC30 Beef Production
0 Units
Lecture: 36 Lab: 54

Purebred and commercial beef cattle production; emphasis on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing, and recordkeeping to ensure scientifically based management decisions and consumer product acceptance as applied to beef cattle. Laboratory required. Field trips required.

VOC ASC34 Livestock Judging and Selection
0 Units
Lecture: 18 Lab: 54

Study of form and appearance of farm animals as related to their function. Includes judging of breeding and terminal livestock as well as carcass evaluation. May require field trip.

VOC ASC51 Animal Handling and Restraint
0 Units
Lecture: 36 Lab: 54

Methods of proper handling for large and small animals including chemical and physical techniques of restraint. Field trips required.

VOC ASC70 Pet Shop Management
0 Units
Lecture: 54

Pet shop operations and the economic aspects of the pet industry. Organization and operation of pet shops, animal care practices, and sound business management practices.

VOC ASC71 Canine Management
0 Units
Lecture: 54

Selection, feeding, housing, breeding and management of dogs, including commercial aspects of the dog as a domestic pet. Laboratory work will include practical experience in the handling and training of dogs. May include field trips.

VOC ASC72 Feline Management
0 Units
Lecture: 54

Care and management of cats including breed identification and characteristics, grooming, showing, nutrition, practical care, behavior, breeding, and housing.

VOC ASC73 Tropical and Coldwater Fish Management
0 Units
Lecture: 36

Care and keeping of marine and freshwater aquarium fishes, plants, and invertebrates. Guidance on setting up aquariums, choosing compatible species, feeding, health care, breeding, and raising fish.

VOC ASC74 Reptile Management
0 Units
Lecture: 36

Care and maintenance of reptiles and amphibians, including snakes, lizards, turtles, tortoises, newts, salamanders and frogs. Identification and characteristics of reptiles commonly kept as pets. Housing, feeding, health maintenance, breeding and raising of reptiles.

VOC ASC76 Aviculture - Cage and Aviary Birds
0 Units
Lecture: 54

Cage and aviary birds marketed in the wholesale and retail pet trade. Identification, nutrition, breeding, disease prevention and control, and aviary construction. Psittacines, soft bills, finches, game birds, poultry, and ornamental waterfowl.

VOC ASC94 Animal Breeding
0 Units
Lecture: 54

The science of animal breeding including fundamentals of inheritance, reproduction, and breeding systems for domestic animals. Artificial insemination, embryo manipulation, and current topics in reproductive biotechnology will also be included.

VOC ASC96 Animal Sanitation and Disease Control
0 Units
Lecture: 54

Prevention and control of infectious diseases affecting domestic animals including basic disease concepts, transmission of infectious diseases, principles of sanitation, and fundamentals of immunology.

VOC ASC97 Artificial Insemination of Livestock
0 Units
Lecture: 36 Lab: 54

Theory and application of artificial insemination of domestic animals, including semen evaluation and processing, heat synchronization, and pregnancy diagnosis.

VOC BA07 Principles of Accounting - Financial
0 Units
Lecture: 90

Financial accounting required of Business Administration and Accounting majors. Defines financial accounting and its relevance to business decision-makers, accounting concepts and techniques, analysis and recording of financial transactions, and preparation, analysis and interpretation of financial statements focusing on application of generally accepted accounting practices. Includes asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls, ethics, and financial statement analysis. General Ledger Accounting Software program is integrated throughout and used to complete various homework assignments.

VOC BA11 Fundamentals of Accounting
0 Units
Lecture: 54

Accounting vocabulary and theory, equations to solve word problems, simple and compound interest, present value, consumer and business credit, mortgages, financial statements and ratios, inventory, depreciation, business taxes, and investments.

VOC BA68 Business Mathematics
0 Units
Lecture: 54

Addition, subtraction, multiplication, division, decimals, percentages, fractions, signed numbers, equations, and problem solving.

VOC BA70 Payroll and Tax Accounting
0 Units
Lecture: 54

On-the-job payroll accounting. Surveys the various tax procedures required by the employer and employee in filing the correct forms for Social Security, federal, and state income taxes and their reconciliation. Laws related to Worker's Compensation, State Disability Benefit Laws, and Fair Employment Practices are discussed.

VOC BA71 Personal Financial Planning
0 Units
Lecture: 54

Integrative approach to personal finance focusing on practical financial decision making as well as the social, psychological, and physiological contexts in which those decisions are made. Students will examine their relationships with money, set personal goals, and develop a plan to meet those goals. Topics include consumerism, debt, healthcare, investing, retirement, long-term care, disability, death, and taxes.

VOC BA72 Bookkeeping - Accounting
0 Units
Lecture: 90

Bookkeeping and accounting principles including the accounting cycle for service and merchandising companies, cash management, payroll, and special journals. Computerized simulations and completion of an accounting project for a company.

VOC BA75 QuickBooks for Accounting
0 Units
Lecture: 54

Accounting concepts utilizing QuickBooks, a general-ledger software program. Hands-on use of a microcomputer to process accounting transactions, prepare statements and reports, and complete accounting cycle tasks.

VOC BA76 Excel for Accounting
0 Units
Lecture: 54

Analysis of financial data and preparation of managerial accounting reports using Excel software. The development of comprehensive analysis models using Microsoft Excel formulas, pivot tables, and pivot charts to summarize complex managerial accounting data into information for decision making. Includes manufacturing and consolidation worksheets, financial statement analysis, and statement of cash flows. The ability to demonstrate the use of presentation methods like Microsoft PowerPoint to effectively communicate analysis of managerial accounting information.

VOC BCDP Basic Computing - Desktop Publishing
0 Units
Lecture: 12-56

Basic desktop publishing to create and produce professional-looking publications.

VOC BCPP1 PowerPoint Basics 1
0 Units
Lecture: 12-56

Basic use of PowerPoint to create slide presentations.

VOC BCPP2 PowerPoint Basics 2
0 Units
Lecture: 12-56

Create PowerPoint presentations using text and object animation, video, audio, and hyperlinks.

VOC BM10 Principles of Continuous Quality Improvement
0 Units
Lecture: 54

History and evolution of thought in Continuous Quality Improvement (CQI), including the theories and methods of Deming, Juran, and Crosby. Practical application of Quality management processes and tools are presented for the continuous improvement of (organizational quality. Relevant case studies are included.

VOC BM20 Principles of Business
0 Units
Lecture: 54

Business and its functions, background, development, organization, and opportunities. Business terms, current trends, methods, contemporary and future problems, and current business practices are covered.

VOC BM51 Principles of International Business
0 Units
Lecture: 54

International business environment with a global perspective. Introduces global viewpoints across the full spectrum of business functions, including, but not limited to: accounting, finance, human resources, management, operations, production, purchasing, and strategic planning.

VOC BM52 Principles of Exporting and Importing
0 Units
Lecture: 54

Practical information needed to participate in activities related to the exporting and importing of goods and services. Includes vocabulary, acronyms, trends, regulations, regional agreements, documentation, and challenges related to the exporting and importing of goods and services.

VOC BM60 Human Relations in Business
0 Units
Lecture: 54

Inter-disciplinary study of how people work and relate at the individual, group, and organizational level. Topics include motivation, team work, leadership skill, and how to handle organizational change.

VOC BM61 Business Organization and Management
0 Units
Lecture: 54

Functions of management, management concepts, planning, organizing, staffing, and controlling. Theories of management, lines of authority, functions of departments, and the importance of policies, procedures, and controls.

VOC BM62 Human Resource Management
0 Units
Lecture: 54

Direction of people including guidance, control, supervisory problems, training, job analysis, interviewing, testing, rating, and other functions involving human resources. Designed to improve the overall understanding of the relationship between the individual and the business organization.

VOC BM66 Small Business Management
0 Units
Lecture: 54

Organizing, starting, and operating a small business enterprise. Emphasis on entrepreneurial applications in a small business environment.

VOC BM85 Special Issues in Business
0 Units
Lecture: 36

Provide business majors with a forum to gain knowledge, develop techniques, problem solve and implement solutions in an actual business situation to add to the creation of a career portfolio.

VOC BO05 Business English
0 Units
Lecture: 54

Skills and techniques of English, as applied to business situations, with emphasis on effective document structure.

VOC BO25 Business Communications
0 Units
Lecture: 54

Written communications, including letters and memos, for a variety of situations in the business environment. Includes writing of good news, bad news, sales, claims, and persuasive correspondence; letters and resumes appropriate to job seeking and application; and practicing oral skills as applied to job interviews and business reports.

VOC BO26 Oral Communications for Business
0 Units
Lecture: 54

Oral communication used in business situations such as training sessions, presentations, professional discussion, and telephone interactions.

VOC BS35 Professional Selling
0 Units
Lecture: 54

Principles of selling and the role of a salesperson in the marketing process. Includes characteristics and skills necessary for a successful salesperson, techniques for prospecting and/or qualifying buyers, buyer behavior, and critical steps in the selling process. Students develop and offer a sales presentation for a selected product, service, or concept.

VOC BS36 Principles of Marketing
0 Units
Lecture: 54

Organization and function of system of distributing goods and services from the point of production to the consumer. Preparation of a marketing plan using product, distribution, promotional, and pricing strategies.

VOC BS50 Retail Store Management and Merchandising
0 Units
Lecture: 54

Principles and practices used in the management and merchandising of retail stores. Includes critical buying function, merchandising, promotional techniques, site selection, layout, staffing, market positioning, and customer service.

VOC BS85 Special Issues in Marketing
0 Units
Lecture: 36

Provides marketing majors with a forum to gain knowledge, develop techniques, problem-solve and implement an actual business marketing plan. Special emphasis will be placed on the particular project of the actual business used as the class project.

VOC CC1 Care Coordinator 1
0 Units
Lecture: 30-60 Lab: 20-30

Communication, culture, diversity, the healthcare system, resources, and wellness to provide timely access to quality healthcare through all phases of the healthcare continuum.

VOC CC2 Care Coordinator 2
0 Units
Lecture: 30-60 Lab: 20-30

Determine needs of patients, identify resources, and create an appropriate discharge plan to prevent readmission. Includes technology, community resources, support delivery, and personal and professional development.

VOC CC3 Care Coordinator 3
0 Units
Lecture: 12-60 Lab: 10-20

Patient care coordination from pre-admission to post-discharge.

VOC CD Child Development
0 Units
Lecture: 50

Survey of child development, addressing knowledge and skills in the development of children from prenatal to school age development. Introduction to theories, stages, best practices, and career paths. The course does not fulfill Title 22 requirements for employment or educational requirement for the CA Child Development Matrix.

VOC CI11 Database Management - Microsoft Access
0 Units
Lecture: 54

Design, creation, and management of relational databases using Microsoft Access. Basic database design, creation of tables, queries, forms, reports, and macros. Creation of custom graphical user interface and introduction to Visual Basic for Applications (VBA) code.

VOC CI11L Database Management - Microsoft Access Laboratory
0 Units
Lab: 27

Laboratory for VOC CI11 - Database Management - Microsoft Access. Exercises focusing on design and development of a business database using Microsoft Access software, including creation of tables and relationships between tables, queries, forms, reports, macros, and an introduction to Visual Basics for Applications (VBA) programming language to make a fully-functioning, user-friendly Access database.

VOC CNT50 Personal Computer (PC) Servicing
0 Units
Lecture: 54 Lab: 54

Personal computer (PC) and peripheral servicing techniques, preventative maintenance, hardware configurations, software configurations, software diagnostics, and the use of test equipment.

VOC CNT52 PC Operating Systems
0 Units
Lecture: 54 Lab: 54

Current operating systems required for A+ and Network+ Certification and general computer servicing. Includes: identification of major components, installation, configuration, upgrading, and troubleshooting.

VOC CNT54 PC Troubleshooting
0 Units
Lecture: 54 Lab: 54

Personal computer (PC) servicing. Includes isolating, identifying, and repairing specific problems in the computer environment at the hardware level. Prepares students for the A+ Certification Exam.

VOC CNT56 Computer Networks
0 Units
Lecture: 54 Lab: 54

Standards, terminology, design, implementation, and troubleshooting techniques as they relate to both local and wide area networks. Emphasis on hardware and software components, network architecture, and data transmission methods. Of special interest to computer and network technicians and those seeking certification in A+, Network+, or other certifications.

VOC CNT58 Server Systems
0 Units
Lecture: 54

Server systems, both physical and virtual. Server installation, configuration, and management. Includes hardware and software components, virtual server configurations, troubleshooting techniques using flow charts and diagnostic tools, and disaster recovery concepts. Emphasis on hardware components. Covers the core material needed for the Server+ Certification. Software content in this course is covered only to the extent that is required for hardware troubleshooting, repair and implementation per CompTIA.

VOC CNT60 A+ Certification Preparation
0 Units
Lecture: 36

Prepares the student and qualified computer technician for the A+ certification examination. All aspects of the A+ Essentials and A+ Practical Application test modules will be stressed through both lecture review and test simulation software.

VOC CNT62 Network+ Certification Preparation
0 Units
Lecture: 36

Prepares the student or A+ certified technician for the Network+ (Net+) certification examination. Includes Open System Interconnection (OSI) model, Transmission Control Protocol/Internet Protocol (TCP/IP), and implementing, installing, maintaining, and supporting networks.

VOC CNT64 Server+ Certification Preparation
0 Units
Lecture: 36

Prepares the computer/network service technician for the CompTIA Server+ certification examination.

VOC CNT66 Security+ Certification Preparation
0 Units
Lecture: 36

Prepares the computer/network service technician for the CompTIA sponsored Security+ Certification examination. Security information is covered only as it pertains to enabling the service technician to troubleshoot a computer system that may have a security problem.

VOC CPBC1 Basic Computing - Level 1
0 Units
Lecture: 54

Introduction to the personal computer, including terminology and basic computer operations in a Windows environment.

VOC CPBC2 Basic Computing - Level 2
0 Units
Lecture: 54

Create documents in applications such as Microsoft Word; includes basic computer maintenance and problem-solving techniques.

VOC CPBC3 Basic Computing - Level 3
0 Units
Lecture: 54

Software application skills including creative projects which introduce computer graphics.

VOC CPBE1 Basic Excel - Level 1
0 Units
Lecture: 12-56

Introduction to Excel, including terminology, and working with data in a spreadsheet application.

VOC CPBE2 Basic Excel 2
0 Units
Lecture: 12-56

Basic functions in Excel including formulas, sorting, filtering data, and formatting tables.

VOC CPBE3 Basic Excel 3
0 Units
Lecture: 12-56

Basic Excel including storing, manipulating and analyzing data in spreadsheets, and displaying data graphically using charts.

VOC CPCC Creative Computing
0 Units
Lecture: 54

Creative skills in utilizing graphic designs for projects such as business cards, letterhead, labels, flyers, posters, greeting cards, and computer-generated fabric designs.

VOC CPDI Digital Photography for the Beginner
0 Units
Lecture: 54

Digital camera operations, image management, composition, and use of graphics software.

VOC CPNET Internet Research - an Introduction
0 Units
Lecture: 54

Fundamental Internet functions including terminology, email, search engines and research tools.

VOC CRIMJ CRIMINAL JUSTICE
0 Units
Lecture: 75-180

History, structure, and functions of the American criminal justice system; law enforcement, courts, and corrections agencies. Examine the interrelationship across agency processes and their impact on contemporary issues in society.

VOC CS11 Computer Keyboarding
0 Units
Lecture: 40-112

Develops alpha and numeric keyboarding skills on a personal computer at a straight-copy rate of 25- to 40-gross words a minute with a predetermined error limit. Includes keyboarding of letters, tables, and reports.

VOC CS12 Intermediate Computer Keyboarding
0 Units
Lecture: 40-112

Develops computer keyboarding speed and accuracy with a proficiency standard upon completion of 35- to 55-gross words a minute with a predetermined error limit. Uses word processing software to format letters, memos, reports, tables, and other related business documents.

VOC CS41 Office Management Skills
0 Units
Lecture: 40-80

Training and skill building in filing systems and procedures, proofreading, telephone techniques, faxing, emailing, electronic calendaring of events, appointments, meetings, memos, and business letters.

VOC CSB10 Office Skills
0 Units
Lecture: 54

Skills necessary to work in an office setting including: alpha and numeric keyboarding, email etiquette and standards, electronic calendaring, ten-key, composing, formatting and storing business documents, and telephone techniques.

VOC CSB11 Computer Information Systems
0 Units
Lecture: 54 Lab: 27

Overview of computer information systems including computer hardware, software, networking, programming, databases, Internet, security, systems analysis, ethics, and problem solving using business applications.

VOC CSB15 Microcomputer Applications
0 Units
Lecture: 54 Lab: 27

Windows operating system (OS) and applications, simple business examples using up-to-date browser, word processing, spreadsheet, database management and presentation software, and integration of software applications.

VOC CSB16 Macintosh Applications
0 Units
Lecture: 27 Lab: 27

Macintosh operating system and related tools; creating files using office applications; storing and sharing files using iCloud.

VOC CSB21 Microsoft Excel
0 Units
Lecture: 54

Spreadsheet concepts using Microsoft Excel including formatting, formulas and functions, charts, linked worksheets, pivot tables, macros, and Visual Basic for Applications (VBA) code.

VOC CSB31 Microsoft Word
0 Units
Lecture: 54

Word processing with Microsoft Word and its editing, formatting, and language tools to create, edit, and format business and publication documents. Includes creating flyers, newsletters, and other publication documents using advanced formatting techniques and tools.

VOC CSB51 Microsoft PowerPoint
0 Units
Lecture: 54

Using PowerPoint to plan, design, and produce effective presentations. Includes creating charts, diagrams, and storyboards; developing appropriate text content; and adding sound, animation, and movies.

VOC CSB61 Desktop Publishing Software
0 Units
Lecture: 54

Formerly VOC CP60 Using desktop publishing software to integrate text and various graphic objects, design, edit and produce a variety of high-quality business publications.

VOC CSW15 Web Site Developmen
0 Units
Lecture: 54 Lab: 27

Use of professional visual Web-authoring application to plan, develop, implement publish and maintain Web sites.

VOC CT Contact Tracer
0 Units
Lecture: 60-90

Process and mechanics of contact tracing. Topics include public health, communication, cultural sensitivity, resources, communicable diseases, collection of data, and courses of action.

VOC ECOM E-Commerce Specialist
0 Units
Lecture: 1-50 Lab: 1-50

Specialization in designing online e-commerce stores. Topics include: online store platforms, target audience, ad campaigns, content marketing, website optimization, digital marketing strategy, and cultural market research.

VOC ED Careers in Education
0 Units
Lecture: 60-180

Explore career opportunities in education and the necessary training, education, and certifications needed to gain employment in this sector. Examine the personal, professional, and technical skills suitable in an education setting.

VOC EDT16 Basic CAD and Computer Applications
0 Units
Lecture: 54 Lab: 54

Basic CD (Computer Aided Design and Drafting) and computer application in engineering and related fields (including basic word processing, spreadsheet, CAD and presentation applications.

VOC EDT18 Engineering CAD Applications
0 Units
Lecture: 54 Lab: 54

Intermediate CAD for engineering, explores the 2-D and 3-D environments, 3-D parametric solid modeling.

VOC EL10 Introduction to Mechatronics
0 Units
Lecture: 18 Lab: 54

A combination of conventional electronic technology with mechanical and computer technology. Special emphasis is on robotics. Hands-on activities include the building of a robot.

VOC EL11 Technical Applications in Microcomputers
0 Units
Lecture: 36 Lab: 54

Personal computer (PC) applications used in electronics technology. Includes word processing, spreadsheets, database, computer presentation methods, and internet research specifically designed for electronics technology.

VOC EL12 Computer Simulation and Troubleshooting
0 Units
Lecture: 18 Lab: 54

Troubleshooting of electronic hardware, including use of computer-based tools for simulation and troubleshooting of analog and digital circuits. National Instruments Multisim software will be used for circuit analysis, value substitution, and fault diagnostics.

VOC EL50A Electronic Circuits - Direct Current (DC)
0 Units
Lecture: 54 Lab: 54

Direct Current (DC) electrical circuits and their applications. Covers DC sources, analysis, test equipment, measurements, and troubleshooting of resistive devices and other basic components. Includes Ohm's Law, Kirchhoff's law, and network theorems. (Students seeking a survey course in electronics should take VOC EL10, Introduction to Mechatronics, rather than VOC EL50A or 50B.)

VOC EL50B Electronic Circuits (AC)
0 Units
Lecture: 54 Lab: 54

Alternating Current (AC) electrical circuits and their applications. Covers AC sources, analysis (using complex numbers), test equipment, measurements, and troubleshooting of basic circuits with capacitors, inductors, and resistors. Includes impedance, resonance, filters, and decibels.

VOC EL51 Semiconductor Devices and Circuits
0 Units
Lecture: 54 Lab: 54

Solid-state devices and circuits, including bipolar-junction and field-effect transistors, rectifier diodes, operational amplifiers, and thyristors. Analog circuits studied include discrete and integrated circuit amplifiers, voltage regulators, oscillators and timers. Emphasizes configurations, classes, load lines, characteristic curves, gain, troubleshooting, measurements, and frequency response.

VOC EL53 Communications Systems
0 Units
Lecture: 54 Lab: 54

Analog and digital communications systems. Emphasizes analog and digital modulation principles, multiplexing, protocols, and telecommunications circuits and systems.

VOC EL54A Industrial Electronics
0 Units
Lecture: 54 Lab: 54

Industrial electronic components and basic control circuits. Includes time delay controls, thyristor controls, relays, optoelectronic (opto) devices, direct current (DC) and alternating current (AC) motor control, transducers, silicon controlled rectifier (SCR) and unijunction transistor (UJT) devices.

VOC EL54B Industrial Electronic Systems
0 Units
Lecture: 36 Lab: 54

Systems application of industrial electronics including industrial production and processes, automation, and programmable and motor controllers. Emphasis is on programmable logic controllers (PLCs).

VOC EL55 Microwave Communications
0 Units
Lecture: 54 Lab: 54

Microwave components and circuits. Stresses transmission lines, Smith Charts, impedance matching, antenna characteristics, wave propagation, frequency analysis, and measurement techniques.

VOC EL56 Digital Electronics
0 Units

Combinational and sequential logic circuits emphasizing number systems, binary math, basic gates, Boolean algebra, Karnaugh maps, flip-flops, counters, and registers. Stresses design and troubleshooting techniques.

VOC EL61 Electronic Assembly and Fabrication
0 Units
Lecture: 36 Lab: 54

Manufacturing and fabrication processes associated with the electronics industry. Printed circuit board (PCB) design from conception to completion. Emphasizes electrical schematics, bill of material (BOM), component selection, layout design, manufacturability, assembly, soldering, de-soldering, and surface-mount technology.

VOC EL62 Advanced Surface Mount Assembly and Rework
0 Units
Lecture: 18 Lab: 54

Advanced course in assembly and repair (soldering) on surface mount assemblies (SMT). Material is similar in content to the Institute for Printed Circuits (IPC) surface mount assembly and rework certification.

VOC EL74 Microcontroller Systems
0 Units
Lecture: 54 Lab: 54

Microcontroller systems and programming methods; programmable logic devices (PLDs); serial communications; conversion of signals from analog to digital formats and the converse. Industry applications, interfacing, and troubleshooting.

VOC EL76 FCC General Radiotelephone Operator License Preparation
0 Units
Lecture: 18 Lab: 54

Prepares qualified electronics and aviation technicians for the Federal Communications Commission (FCC) commercial General Radiotelephone Operator License (GROL).

VOC EL81 Lab Studies in Electronics
0 Units
Lab: 54

Extended laboratory experience supplementary to those available in the regular program. Allows the student to pursue more advanced and complex laboratory projects and experiments.

VOC EMT90 Emergency Medical Technician
0 Units
Lecture: 100-160 Lab: 45-60

Approved by the Los Angeles (LA) County Emergency Medical Services (EMS) Agency. Develops the ability to recognize the signs and symptoms of various illnesses and injuries. Teaches proper procedures of pre-hospital emergency care per local and national standards. Awards an Emergency Medical Technician (EMT) Course Completion Certificate needed to take National Registry Certifying Exam. Necessary for many jobs in emergency care and is a prerequisite for entry into a paramedic program and most fire department jobs.

VOC ESD02 Production of Boutique Crafts for Retail Sales
0 Units
Lab: 54

Design and production of boutique crafts. Includes marketing, pricing, cost analysis, and use of emerging technology.

VOC ESD03 Lettering Styles and Advertising Calligraphy
0 Units
Lab: 54

Styles of calligraphy as they are used in art, media, and advertising. Includes size, placement, styles, and emerging technology.

VOC ESD07 Handcrafted Needlework for Retail Sales
0 Units
Lab: 54

Needlework technique including knitting, crocheting, embroidery, needlepoint for plastic canvas, and emerging technology to construct finished products for sale.

VOC ESD08 Jewelry Production and Design for Retail Sales
0 Units
Lecture: 12-56

Design and construct wire-worked jewelry using beads and stones with various methods of wire wrapping, coiling, hammering, and emerging technology.

VOC ESD09 Sewing and Design
0 Units
Lab: 54

Basic sewing techniques for basic tailoring, pattern reading, cutting, and style design to construct professional looking garments.

VOC ESD10 Beginning Decorative Art Production for Retail Sales
0 Units
Lab: 54

Introduction to decorative painting and associated mediums. Includes painting on a variety of surfaces using tole art brush strokes used in folk art, stenciling, and other design applications and emerging technology.

VOC ESD11 Intermediate Decorative Art Production for Retail Sales
0 Units
Lab: 54

Intermediate tole art brush strokes on a variety of surfaces using acrylic paints, associated mediums, and emerging technology to create finished products.

VOC ESD15 Jewelry and Lapidary Production Design
0 Units
Lecture: 12-56

Jewelry making, stone cutting, polishing, and lapidary work, using emerging technology.

VOC EST50 Electrical Fundamentals for Cable Installations
0 Units
Lecture: 40-120 Lab: 20-60

Electrical fundamentals for cable and wire installations and other low voltage systems. Includes direct current (DC) and alternating current (AC), solid-state devices, digital and microprocessor devices, and their application to cable installations.

VOC EST51 Electrical & Tool Fundamentals
0 Units
Lecture: 54 Lab: 54

Electrical and tool(hand and power) fundamentals for low voltage systems used in residential, and commercial security, networks, and audio/video systems. Topics include tool fundamentals, DC/AC sources and components, solid-state devices, digital devices, and their application to low voltage systems.

VOC EST52 Fabrication Techniques for Cable Installations
0 Units
Lecture: 40-75 Lab: 20-40

Fabrication techniques used in the installation of home theater, computer networks, home automation, and other low voltage system applications. Emphasis on hand and power tools, construction methods, and materials as they apply to cable and wire installations. Prepares students for the California (CA) State Contractors C-7 low voltage systems license.

VOC EST53 Residential/Office System Installations
0 Units
Lecture: 54 Lab: 54

Residential/office systems and their installations. Emphasis on security, audio/video systems, wiring and cable standards and the installation techniques required for such systems.

VOC EST54 Cable and Wiring Standards
0 Units
Lecture: 40-120 Lab: 20-60

Cable and wire standards of video, voice, and data wiring for home theater, computer networks, home automation, telecommunications, and other low voltage system installations. Emphasis on copper wire, coax, fiber optic, and structured cables.

VOC EST56 Home Theater, Home Integration & Home Security Systems
0 Units
Lecture: 40-75 Lab: 20-40

Home theater, home integration, home management Power Line Carriers (PLCs), security hardware and programming, and the installation and servicing of such systems.

VOC EST61 Electronic Circuits/Systems Troubleshooting
0 Units
Lecture: 54 Lab: 54

Troubleshooting basic electronic circuits and systems to component level. Circuits include power supplies, amplifiers, audio circuits, and video systems.

VOC EST62 Electronic Troubleshooting 1
0 Units
Lecture: 30-60 Lab: 30-60

Troubleshooting appliances and electronic systems to the subsystem and component levels. Covers installation, troubleshooting, maintenance, and operation of a variety of small and large appliances.

VOC EST64 Electronic Troubleshooting 2
0 Units
Lecture: 54 Lab: 54

Troubleshooting advanced electronic video circuits and systems to component level. Includes HDTV (plasma, LCF, DLP).

VOC ET90A Introduction to EMS System
0 Units
Lecture: 15-25 Lab: 22-30

Prerequisite for VOC EMT 90. Introduces concepts of the Emergency Medical Services (EMS) System, roles, and responsibilities. Basic concepts of patient assessment and scene management taught. Stresses collaboration with other scene team members.

VOC FAB General Fabrication
0 Units
Lab: 4-180

Project support course for students completing fabrication projects. Digital fabrication including 3D printing, laser cutting, and Computer Numerical Controlled (CNC) vinyl and fabric production. Conventional fabrication techniques including wood working, machining, sheet metal, welding and plasma cutting.

VOC FDB1 Financial and Database Managment 1
0 Units
Lecture: 4-288

Short-term introduction to small business and database software to introduce elementary computer literacy. Data entry in small business accounting management software. Create customers, vendors, and basic transactions. Design simple databases and explore database objects including simple forms, reports, and queries.

VOC FDB2 Financial and Database Management 2
0 Units
Lecture: 4-288

Further instruction in basic computer literacy for small business and database software. Process sales tax, refunds, discounts, and credits using small business accounting software. Create classes and basic estimates. Modify reports, queries, and forms.

VOC FSF Tool Use and Field Service Fundamentals
0 Units
Lecture: 2-50 Lab: 2-50

Introductory course in tool use and material fabrication as applied to field-serviceable equipment. Covers elementary aspects of installation and maintenance with emphasis on safety and proper use of hand and power tools, fasteners, and other hardware.

VOC FSH08 Introduction to Fashion
0 Units
Lecture: 54

Fashion industry as a whole, including raw materials, manufacturing, retailing, technology, world economics, globalization, and careers. Includes apparel design, manufacturing, retail merchandising, sales, promotion, textile production, and career opportunities.

VOC FSH09 History of Fashion
0 Units
Lecture: 54

Survey of Western costume and fashion from antiquity to contemporary times. Emphasis is placed on style as it relates to social, economic, and political forces, and the relationship of historic styles to current fashion.

VOC FSH10 Clothing Construction 1
0 Units
Lecture: 36 Lab: 54

Essentials of industry standard apparel construction techniques using a variety of machines and equipment. Students will be given instruction in single needle machine operation, industrial overlock operation, and garment assembly.

VOC FSH12 Clothing Construction 2
0 Units
Lecture: 36 Lab: 54

Advanced industry construction techniques using overlock and single needle machines.

VOC FSH15 Aesthetic Design in Fashion
0 Units
Lecture: 54

Design principles and influences in apparel selection and fashion design. Projects applying design elements and principles using computer-aided design (CAD) software.

VOC FSH16 Corset Construction
0 Units
Lecture: 36 Lab: 54

History of the corset, types of corset fabrics, trims and methods of embellishment. Essentials of standard apparel corset construction techniques using a variety of tools and equipment. Skills learned can be applied to historical or contemporary corsets.

VOC FSH17 Textiles
0 Units
Lecture: 54

Introductory study of the physical and chemical properties of textiles. Textile fiber production, classification, properties, and identification. Textiles coloration and finishing processes. Relationship of fiber characteristics, coloration, and finishing processes to fabric properties, performance, legislation, and care.

VOC FSH21 Patternmaking I
0 Units
Lecture: 18 Lab: 108

Flat patternmaking techniques to create garment designs using industry standards, dart transfer, and seam manipulation. First and production patterns will be created, constructed, and fitted.

VOC FSH22 Fashion Design by Draping
0 Units
Lecture: 36 Lab: 54

Three dimensional dress design through draping fabrics directly to a dress form to create original designs and patterns to interpret fashion illustrations and technical flats.

VOC FSH23 Patternmaking 2
0 Units
Lecture: 36 Lab: 54

Intermediate pattern drafting and flat patternmaking with an introduction to technical packages. Students apply patternmaking theories to create ready-to-wear sportswear designs for misses and women's wear.

VOC FSH24 Fashion Patternmaking by Computer
0 Units
Lecture: 36 Lab: 54

Industrial fashion patternmaking and grading using Gerber computer-aided design (CAD) technology. Exploration of drawing techniques, pattern development, flat pattern manipulation, and the sizing and grading of patterns.

VOC FSH25 Fashion Digital Illustration and Design
0 Units
Lecture: 36 Lab: 54

Technical fashion drawing techniques using Adobe Illustrator and Photoshop. Includes drawing production flats, colorization, and digital fashion figures using a computer as a drafting tool. Exploration of popular computer techniques and apparel industry design methods.

VOC FSH57 Fashion Retailing and Production Technologies
0 Units
Lecture: 54-54

Apparel wholesale to retail concepts and technologies used in fashion merchandising environment systems. The emphasis is on practical knowledge and use of software in the fashion industry.

VOC FSH59 Fashion Retailing
0 Units
Lecture: 54

Overview of fashion retailing, on site environments, online fashion stores, management and multi-channel retailers. Principles focus on the fashion segment of the retailing industry and the merchandising of fashion products.

VOC FSH62 Retail Buying and Merchandising
0 Units
Lecture: 72

Principles and practices used in retail buying and merchandising environment. This course emphasizes the buyer's role in merchandising management, quantitative retail formulas, costing calculations, pricing strategies, and managing profit. Students will apply concepts learned using Microsoft Excel.

VOC FSH63 Fashion Promotion
0 Units
Lecture: 54

Principles and techniques of integrated marketing communications for apparel wholesale and retail products. Emphasis focuses on principles of integrated marketing and communication strategy, market and consumer research, branding, and the comprehensive nature of promotion in the fashion merchandising environment and emphasizes the changing nature of promotion in a global marketplace.

VOC FSH66 Visual Merchandising Display
0 Units
Lecture: 36 Lab: 54

Design principles, color theory, space, and lighting in relation to visual merchandising display areas and interior design of stores using various applications of computer graphics programs.

VOC FSVCS Food Services
0 Units
Lecture: 60-180

Principles of food preparation, service procedures and sanitation, and safety practices in the food service industry. Study the application of food costing, recipes and menu planning, and professional dining service practices in various types of food operation businesses. Examine employment skills and knowledge suitable for careers in this industry.

VOC GOG10 Introduction to Geographic Information Systems (GIS)
0 Units
Lecture: 54

An introduction to the fundamentals of a geographic information system (GIS), including history of automated mapping; introduction to cartographic principles; overview of software, such as ArcView; hardware; application of GIS technology in environmental sciences, government, business, terminology, data and spatial analysis.

VOC HBB1 Starting a Home-Based Business
0 Units
Lecture: 24

Starting a home-based business to become self-employed. Includes basic marketing, finance and management skills.

VOC HBB2 Managing and Growing Your Home-Based Business
0 Units
Lecture: 24

Managing day-to-day business activities to increase revenue and profitability to grow a home-based business.

VOC HEP Healthcare Exam Preparation
0 Units
Lecture: 4-75

General health sciences, affixes and medical terminology, statistical graphing and charting, technical writing, grammar, reading comprehension, listening and communicating skills, and test-taking strategies for entrance into healthcare programs and exams.

VOC HHA Home Health Aide
0 Units
Lecture: 10-30 Lab: 10-30

Preparation for certification as Home Health Aide by the State of California. Includes Federal and State regulations, client needs, quality of care, and clinical hours.

VOC HOSP Hospitality
0 Units
Lecture: 60-180

Organizational structure and functions of the various segments that comprise the hospitality industry. Examination of principles of management, service, and business operations. Study of history, development, and interrelatedness of segments in the industry, along with careers in hospitality.

VOC HSW Health and Safety for Workplace
0 Units
Lecture: 1-80

Contextualized health and safety course for various workplace environments. Focuses on safe work practices in offices, industry, and construction as well as how to identify and prevent or correct problems associated with occupational safety and health. Designed to assist the student with the implementation of safe and healthy practices at work.

VOC HTH01 Certified Nursing Assistant
0 Units
Lecture: 65-105 Lab: 85-125

This course prepares students to function as a nursing assistant in a variety of health care settings under the supervision of a licensed nurse. Students will be prepared to take the California Nurse Aide certification examination upon completion.

VOC HTH04 Acute Certified Nursing Assistant (CNA)
0 Units
Lecture: 48-75 Lab: 80-120

Preparation of CNA to provide basic personal care to patients in acute care facilities and hospitals.

VOC HTH05 Health Careers Skills Lab (HCRC)
0 Units
Lab: 1-320

Health occupational training and experience using instructional equipment and simulators for health occupation competencies.

VOC HTH06 Health Careers Employability Skills
0 Units
Lecture: 10-60

Provides training to ensure the delivery of high quality care meeting the industry expectations. This course covers communication competency, workplace ethics and professionalism, team building and collaboration, effective problem solving, embracing diversity, and demonstrating compassion.

VOC HTH12 Medical Terminology
0 Units
Lecture: 40-60

Medical terminology used in various allied health fields.

VOC ID10 Introduction to Interior Design
0 Units
Lecture: 36

Interior design and the planning of total interior environments that meet individual, functional, and environmental needs. Field trips may be required.

VOC ID10L Introduction to Interior Design Laboratory
0 Units
Lab: 54

Application of the interior design practice and the planning of total interior environments that meet individual, functional, and environmental needs. Field trips may be required.

VOC ID12 Materials and Products for Interior Design
0 Units
Lecture: 36 Lab: 54

Analysis, application, and evaluation of products and materials used in interior design. Field trips required.

VOC ID14 History of Furniture and Decorative Arts
0 Units
Lecture: 54

Historic development of structure, interior spaces, furniture, and decorative arts throughout the world. Interior architecture is illustrated in this overview of design heritage from antiquity to present. Emphasis is placed on style development as it relates to social, economical, and political influences as well as the use of materials and technology. Field trips may be required.

VOC ITECH Information Technology
0 Units
Lecture: 54-80

Information Technology core aspects focusing on applications, processes, and their impact on society, businesses, and individuals. Career opportunities that utilize IT skills and participate in activities that integrate teamwork and communication skills that will enhance employability.

VOC LGAN Logistics Analyst
0 Units
Lecture: 1-50 Lab: 1-50

Specialization in creating value for logistics operations through creating, mining, and the analyzing of data. Topics include: a data driven logistics operation, evaluating, and analyzing a company's physical and informational assets, operations forecasting, and creating company value that reduce inefficiencies and consume profits.

VOC LOS Logistics Operations Specialist
0 Units
Lecture: 1-50 Lab: 1-50

Specialization in logistics and distribution center operations. Topics include: inventory control, transportation management, supplier vendors, customer relationships.

VOC LS Land Surveying
0 Units
Lecture: 30-60 Lab: 30-60

A practical course in land surveying with a review of mathematics. Hands-on experience with surveying instruments such as measuring wheel, surveyor's tapes, automatic and digital levels, optical theodolites, and electronic total station. No materials needed.

VOC LTEC Logistics Technician
0 Units
Lecture: 1-50 Lab: 1-50

Specialization in designing and enhancing systems that help streamline logistics operations. Topics include: implementing and troubleshooting Warehouse Management Systems, CRM's (Customer Relations Management) Systems, RF (Radio Frequency) scanners, data reports and operation automation technology.

VOC LWFRC Law Enforcement
0 Units
Lecture: 60-180

Policing in America including its historical evolution, social issues in law enforcement, and practices in law and public safety. Policing agencies at the local, state, and federal levels.

VOC MAST Medical Assistant
0 Units
Lecture: 60-180

Scope of practice, tasks, and responsibilities of the Medical Assistant; theory and foundational skills in medical assisting. Study essential competencies that provide a central body of knowledge for movement into administrative or clinical career paths.

VOC MCCR Math for College and Career Readiness
0 Units
Lecture: 4-140

Contextualized math course to prepare students for successful transition to college, apprenticeships, and employment. Topics include numeracy, fractions, decimals, unit conversion, ratios, proportions, algebra, measurement, and statistics.

VOC MDCS Medical Core Studies
0 Units
Lecture: 60-180

Study of health and disease, human body systems, medical terminology and vocabulary, and healthcare systems and processes. Focus on anatomy, physiology, pathology of the various systems, and career opportunities in healthcare.

VOC MF10 Mathematics & Blueprint
0 Units
Lecture: 54

Applications of mathematical principles, including fractions, decimals, ratio and proportion, geometry and trigonometry to manufacturing problems and their solutions. Reading and interpreting part drawings, assembly drawings and sketches used in the manufacturing industry.

VOC MF11 Manufacturing Processes 1
0 Units
Lecture: 18 Lab: 54

Manual and computerized manufacturing, manual lathes and mills, tool nomenclature and Computerized Numerical Control (CNC) operations. Operation of CNC machines.

VOC MF110 Introduction to CAD
0 Units
Lecture: 54 Lab: 54

Basic Computer Aided Design (CAD) and computer applications (AutoCAD and SolidWorks) in engineering and related fields, including basic word processing, spreadsheet, CAD, and presentation applications. Production card and digital calipers required.

VOC MF12 Manufacturing Processes 2
0 Units
Lecture: 18 Lab: 54

The study of manufacturing equipment and manufacturing processes. Theory and practice in milling operations, tooling setup, metallurgy, heat treatment, precision grinding and basic tool design.

VOC MF130 Manufacturing Processes and Materials
0 Units
Lecture: 36 Lab: 54

Common manufacturing processes used to cut, bend, form, mold, and cast common metal and plastic alloys. Investigates material properties, structural concepts, and joining methods. Includes survey of advanced manufacturing technologies.

VOC MF140 Print Reading and Shop Practice
0 Units
Lecture: 36 Lab: 54

Print reading, layout, tools, and methods used in fabrication and manufacturing industries. Print reading fundamentals and mastery of tool and process selection, safety; proficiency in basic machine operation skills.

VOC MF150 Manual Machining 1
0 Units
Lecture: 36 Lab: 54

Conventional mill and lathe safety and machining practices, tool nomenclature, lathe and mill operation, application and tooling. Application to Computer Numerical Control (CNC) machines. Production cards and calipers required.

VOC MF155 Manual Machining 2
0 Units
Lecture: 18 Lab: 54

Intermediate application of conventional mill and lathe safety and machining practices, tool nomenclature, lathe and mill operation, application and tooling. Production cards; safety glasses, hearing protection, and calipers required.

VOC MF160 Introduction to Mechanical Principles
0 Units
Lecture: 36 Lab: 54

Use of mechanical demonstration kits, computer aided design (CAD) and other media to survey mechanical devices, concepts, and principles common to manufactured products and manufacturing processes. Analysis, discussion, and problem solving related to mechanical design scenarios and supported by CAD. Emphasis on mechanical literacy. Production cards and calipers required. Field trips may be required.

VOC MF180 Introduction to MasterCAM
0 Units
Lecture: 36 Lab: 54

Use MasterCAM X software to create wire-frame part geometry, add tool paths, and create computer numerical control (CNC) code for CNC mills and CNC lathes. Overview of tooling and tooling nomenclature.

VOC MF250 Introduction to CNC Programming
0 Units
Lecture: 18 Lab: 108

Theory and practice of manually developing Computer Numerical Control (CNC) programs. Writing and editing program code for CNC mills and lathes. Methods of transmitting data to CNC machines and operation of CNC mills and lathes.

VOC MF260 CNC Operation
0 Units
Lecture: 18 Lab: 108

Operation of computer numerical control (CNC) machines and their applications in manufacturing. Students will learn to analyze and interpret industry prints to determine datums, orient work to the machines, set up, and apply work holding solutions and basic tooling and machining strategies common in the industry. Students will be involved in producing and machining industry representative parts.

VOC MF38 MasterCAM 1
0 Units
Lecture: 18 Lab: 54

Use MasterCAM software to create wire-frame part geometry, add tool paths and create CNC code for CNC mills and CNC lathes.

VOC MF38B Advanced MasterCAM
0 Units
Lecture: 18 Lab: 54

Use MasterCAM software to create wire-frame 3D/multi-axis part geometry, add tool paths, and create CNC code for CNC mills and CNC lathes.

VOC MF38C MasterCAM Solids
0 Units
Lecture: 18 Lab: 54

Using MasterCAM software to design wire drawings, translate to solids drawings, and generate code from a solids creation to meet industrial standards.

VOC MF85 Manual CNC Operations
0 Units
Lecture: 18 Lab: 54

Theory and practice in manually developing CNC programs. Methods of transmitting data to CNC machines and physical set-up and operations of CNC equipment.

VOC MFES Manufacturing and Electrical Systems
0 Units
Lecture: 25-50 Lab: 25-50

A basic understanding of electrical systems; troubleshooting electrical circuits; understanding and identifying what quality is; use of tools for inspection; and diagnostics investigation.

VOC MFPP Manufacturing and Production Principles
0 Units
Lecture: 25-50 Lab: 25-50

Focus on manufacturing and production principles. Concepts include torque, basic assembly techniques, use of materials, safety, use of tools, bonding and finishing, accurate measurements, high voltage safety, and reading blueprint drawings.

VOC MFTH Manufacturing Theory and Blueprint Reading
0 Units
Lecture: 50-100

Manufacturing theory, including lean manufacturing concepts, 5S methodology housekeeping, 7 wastes, principles of what is work, including value add and non-value add, continuous improvement, pull systems, and error proofing. Software includes Takt time production. Components of blueprints and how to read blueprint drawings.

VOC MIT Mobile Information Technology for the Beginner
0 Units
Lecture: 12-54

Introduction to mobile information technology for skills, concepts, and principles to safely and effectively use mobile platform devices and the internet.

VOC MR01 Medical Records
0 Units
Lecture: 25-60 Lab: 25-60

Basics of health information management and medical office skills. Topics include the content, structure, management, analysis, and processing of health information, and issues surrounding quality, confidentiality, and compliance. Special emphasis is placed on electronic information processing. Prepare students for the Electronic Health Records Specialist Certification exam from the National Healthcareer Association, with the potential to earn the Certified Electronic Health Records Specialist (CEHRS™) credential.

VOC NF81 Cooking for Health and Wellness
0 Units
Lecture: 9 Lab: 27

Principles and techniques of healthful food preparation, investigation of chronic disease prevention through dietary means, and recipe modification. Includes laboratory experience in preparation of healthful foods and meals. Off-campus meetings may be required.

VOC NF82 Vegetarian Cuisine
0 Units
Lecture: 9 Lab: 27

Principles and techniques of vegetarian food preparation and investigation of issues related to vegetarian eating practices. Includes laboratory experience in preparation of vegetarian foods and meals. Off-campus meetings may be required.

VOC OTA Occupational Therapy Aide
0 Units
Lecture: 40-130 Lab: 20-50

Role and skills of occupational therapy aide. Includes terminology, procedures and interpersonal skills.

VOC PCA Personal Care Aide
0 Units
Lecture: 90-130

Preparation to assist elderly, disabled, and ill persons. Roles and responsibilities of a caregiver. Communication skills, maintenance of a healthy environment, and procedures for emergencies. Physical, emotional, and developmental characteristics of the consumers served, personal hygiene, safe transfer techniques, and basic nutrition.

VOC PH11A Intermediate Photography
0 Units
Lecture: 36 Lab: 54

Professional photography techniques and studio lighting. Includes studio and field assignments related to problems encountered while professionally photographing people and products. Topics include medium and large format film, continuous and strobe lighting.

VOC PH11B Digital Capture Workflow
0 Units
Lecture: 36 Lab: 54

Advanced application of digital capture and workflow using digital single-lens reflex (DSLR) medium and large format digital camera systems and software to produce high-quality digital photographs. Field trips may be required.

VOC PHO04 Digital Cameras and Composition
0 Units
Lecture: 18

Use of digital cameras, lenses, filters and exposure to compose quality photographs. Shooting assignments are given for analysis in class. Camera will be required after the second week.

VOC PHO09 Digital Image Editing for Photographers
0 Units
Lecture: 36 Lab: 54

Software and techniques including digital workflow practices, digital image editing, enhancing and retouching methods commonly used in photography.

VOC PHO10 Basic Digital and Film Photography
0 Units
Lecture: 36 Lab: 54

Basic mechanical, optical and chemical principles of photography, including digital image systems. Laboratory experience involves problems related to camera and image output techniques.

VOC PHO12 Photographic Alternatives
0 Units
Lecture: 36 Lab: 54

Alternative photographic processes. Instant films: lifts and transfers, specialized lighting, stain toning, emulsion coating, and scenography will be applied to produce images not considered common to making photographic prints.

VOC PHO14 Commercial Lighting
0 Units
(May be taken for Pass/No Pass only)
Lecture: 36 Lab: 54

Use of studio equipment, and studio and location lighting techniques used in all aspects of commercial photographic applications. Field trips may be required.

VOC PHO15 History of Photography
0 Units
Lecture: 54

Survey of the history of photography from early 1800s to the present, introducing various concepts of photo representation and their impact on society. Field trip required.

VOC PHO16 Fashion and Editorial Portrait Photography
0 Units
Lecture: 36 Lab: 54

Fashion and editorial portrait photography with studio and location lighting techniques, creative concepts, styling, and working with models.

VOC PHO17 Photocommunication
0 Units
Lecture: 36 Lab: 54

Enhancing visual communication of commercial, documentary, and fine art imagery. Includes using camera tools (lens, aperture, shutter) lighting, color, and design to create images that clearly communicate messages.

VOC PHO18 Portraiture and Wedding Photography
0 Units
Lecture: 36 Lab: 54

Professional studio and field techniques for portrait and wedding photography. Off-camera assignment or field trips may be required.

VOC PHO19 Digital Color Management
0 Units
Lecture: 36 Lab: 54

Digital color management software and hardware skills, techniques and digital workflow practices commonly used in photography.

VOC PHO1A Laboratory Studies: Beginning Black and White Photography
0 Units
Lab: 54

Extended black-and-white laboratory experiences to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

VOC PHO1B Laboratory Studies: Advanced Black and White Photography
0 Units
Lab: 54

Extended advanced black and white laboratory experiences with medium and large format cameras to improve skills and pursue more advanced photographic printing, processing, and enlarging techniques.

VOC PHO1C Laboratory Studies: Studio Photography
0 Units
Lab: 54

Extended studio photography experiences to supplement those available through the regular program. Provides students the opportunity to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

VOC PHO1D Laboratory Studies: Computer Applications in Photography
0 Units
Lab: 54

Extended computer laboratory experiences to supplement those available in the regular program. Provides students the opportunity to improve skills through further instruction and practice, as well as pursue more advanced projects and experiments.

VOC PHO20 Color Photography
0 Units
Lecture: 36 Lab: 54

Use of color principles as they relate to commercial and artistic styles. This includes lighting, color theory, color management, exaggerated and unique color schemes applied color psychology principles.

VOC PHO21 Exploring Color Photography
0 Units
Lecture: 36 Lab: 54

Use of color principles as they relate to commercial and artistic styles and innovative use of color applications. Includes lighting and unusual techniques, exaggerated and unique color schemes, light-painting, lighting effects, high dynamic range effects and oversize output.

VOC PHO24 Advanced Digital Image Editing for Photographers
0 Units
(May be taken for Pass/No Pass only)
Lecture: 36 Lab: 54

Advanced software and techniques for digital image editing, archiving, and retouching used in commercial photography.

VOC PHO28 Photography Portfolio Development
0 Units
Lecture: 36 Lab: 54

Development of a photography portfolio for use in job application or gallery exhibition purposes. Field trips may be required.

VOC PHO29 Studio Business Practices for Commercial Artists
0 Units
Lecture: 54

Studio business practices for commercial artists. Small business operations, pricing services based on the Licensing Business Model, copyright basics, project production, and estimating and invoicing. Field trips may be required.

VOC PHO30 Advertising Photography
0 Units
Lecture: 36 Lab: 54

Overview of the commercial photographic industry. Exploration of the various commercial photography specialties including studio product and people photography, lifestyle, fashion and industrial/location photography with an emphasis on the development of a personal creative style. Field trips may be required.

VOC PHOTO Basic Photography
0 Units
Lecture: 60-180

Introductory photographic elements of art and principles of design, composition, and lighting. Explore career opportunities related to photography.

VOC PPCCR Professional and Postsecondary Skills for College and Career Readiness
0 Units
Lecture: 4-80

Contextualized essential professional and postsecondary skills course to prepare students for successful transition to college, apprenticeships, or career. Topics include effective communication, analysis/solution mindset, collaboration, digital fluency, empathy, adaptability, entrepreneurial mindset, handling setbacks, self-awareness, and social diversity/awareness.

VOC PT81 Physical Therapy Aide
0 Units
Lecture: 25-60 Lab: 25-60

Role and skills of physical therapy aide. Includes terminology, procedures, and interpersonal skills.

VOC PTEC1 Pharmacy Technician 1
0 Units
Lecture: 30-150

Entry-level course in pharmacology, anatomy and physiology of the muscular, skeletal, respiratory, renal, cardiovascular, and hematologic systems, brand and generic name medications, alternative therapies, routes of administration, standard precautions, and the law and ethics of pharmacy practice. Introduction to the role of pharmacy clerks and technicians.

VOC PTEC2 Pharmacy Technician 2
0 Units
Lecture: 50-150

Pharmacology, anatomy and physiology of the nervous, endocrine, gastrointestinal, reproductive, immune, ears/nose/throat, and dermatologic systems, brand and generic name medications, alternative therapies, routes of administration, and standard precautions. Introduction to over-the-counter (OTC) and non-prescription products.

VOC PTEC3 Pharmacy Technician 3
0 Units
Lab: 75-150

Practical pharmacy experience in selected outpatient, inpatient, acute care, home health, or selected hospital settings under the supervision of registered pharmacists and clinical work-based learning coordinator. Intravenous additives, sterile compounding, prescription dispensing, inventory management, customer service, communication and professional ethics. Students will be prepared to take the Pharmacy Technician Certification Board examination upon course completion.

VOC RDTEC Intravenous Therapy for Radiologic Technology
0 Units
Lecture: 10 Lab: 12

Principles and techniques of venipuncture. Includes anatomy and physiology of sites, instruments, intravenous (IV) solutions, equipment, puncture techniques, hazards and complications, emergency care, post-puncture care.

VOC RWCCR Reading and Writing for College and Career Readiness
0 Units
Lecture: 1-80

Contextualized reading and writing course to prepare students for successful transition to apprenticeships, college, and career. Skimming and scanning, annotation, reading for main idea, reading strategies, sentence structure, summarizing versus responding, paragraph structure, paragraph types, reading charts and graphs, and vocabulary.

VOC SPMD Sports Medicine
0 Units
Lecture: 60-180

Introductory theory and practice in sports medicine focusing on the prevention, recognition, evaluation, and treatment of common athletic injuries.

VOC SPT Solar Panel Technology
0 Units
Lecture: 30-75 Lab: 10-25

Entry-level solar panel installation training for technician from project planning to final inspection and trouble shooting. Safe working practices, conditions where the most power can be captured from sunlight, and the physics of solar panel operation are covered. Additionally, the student will learn the mechanical aspects of installation such as tools, mounting hardware, and maintaining roof integrity. Electrical instruction will include the different configurations of circuitry and types of grid connections. Hands-on practical labs are designed to emphasize and support the lecture curriculum.

VOC ST1 Sewing and Tailoring 1
0 Units
Lab: 4-54

Patternmaking and garment fitting with flat pattern and draping methods, learned through process of creating a personal fitting form.

VOC ST2 Sewing and Tailoring 2
0 Units
Lab: 54

Haute couture garment construction, including couture tailoring techniques for inner structure, finishing, and achieving superior overall appearance.

VOC STECH Surgical Technician
0 Units
Lecture: 60-180

Scope of practice, tasks, and responsibilities of the Surgical Technician; the operative environment and professional roles.

VOC TCH60 Customer Relations for the Technician
0 Units
Lecture: 36

Customer relations (soft skills) for the technician including benefits for knowing and using effective customer contact tools, proper customer interactions, ethics, and maintaining customer satisfaction.

VOC THR14 Stagecraft
0 Units
Lecture: 36 Lab: 54

Theory and practice of scenery construction, scenic painting, and stage rigging. Practical work in scene construction and rigging with the opportunity to perform these tasks in actual theater situations.

VOC THR19 Theatrical Costuming
0 Units
Lecture: 36 Lab: 54

The study of costume history, principles of costume design, fibers and textiles, basic costume construction and design rendering techniques. Costume crew assignments for major productions will provide practical instruction in actual performance demands on costumes and their proper maintenance. Class is suitable for people interested in costuming for theater, dance, film, television and reenactments.

VOC TR10A Introduction to Tutoring
0 Units
Lecture: 18

Introduction to tutoring with an emphasis on tutoring strategies, problem-solving, and working with a diverse student population.

VOC TR10B Tutoring in the English Language
0 Units
Lecture: 18

Tutoring in the English language using approaches to working with students on written drafts and the needs of non-native speakers.

VOC TR10C Tutoring - Supplemental Instructor
0 Units
Lecture: 18

Tutoring in the classroom and in small groups under the supervision of a designated instructor.

VOC TR10D Tutoring in Mathematics
0 Units
Lecture: 18

Tutoring in mathematics with an emphasis on strategies, active learning, and dealing with obstacles in developmental algebra.

VOC TR10R Tutoring in Reading
0 Units
Lecture: 18-18

Application of strategic reading processes and approaches to tutoring reading. Prepares students to become tutors for reading across disciplines.

VOC TRAD1 Introduction to Construction Trades 1
0 Units
Lecture: 40-120

An introduction to the various building and construction trades. Overview and history of the trades and unions, and preparation for entrance into the apprenticeship programs and construction industry.

VOC TRAD2 Introduction to Construction Trades 2
0 Units
Lecture: 40-120

Second module introducing essential topics related to various building and construction trades. Construction health and safety, basic components of a blueprint, green construction, and financial literacy.

VOC WL30 Metal Sculpture
0 Units
Lecture: 18 Lab: 54

Welding processes used in the metal sculpting industry to create three-dimensional art forms. Covers design, pre-construction analysis, and cost estimates for projects. Includes use of equipment for oxyfuel welding, gas metal arc welding (GMAW), gas tungsten arc welding (GTAW), shielded metal arc welding (SMAW), and flux-cored arc welding (FCAW). Includes demonstrations and exercises in welding as it relates to the art industry.

VOC WL40 Introduction to Welding
0 Units
Lecture: 18 Lab: 54

Fundamentals of welding processes related to the areas of fabrication, construction, machine tool, aerospace, and the transportation industries.

VOC WL50 Oxyacetylene Welding
0 Units
Lecture: 18 Lab: 54

Oxyacetylene fusion welding (OAW), non-fusion welding and cutting, Brazing and Brazed welding (OFB), Gas Tungsten Arc Welding (GTAW), fusion and non-fusion welding. Develops understanding of and fundamental skills in modern welding practices.

VOC WL51 Basic Electric Arc Welding
0 Units
Lecture: 18 Lab: 54

Electric arc welding and cutting processes (SMAW, GTAW, GMAW, FCAW, PAC), and their similarities and differences. Exploring each of these arc welding processes to gain more experience and skill welding with these processes and also gain an understanding of each of these different welding processes' strengths and weaknesses. Lab and shop safety.

VOC WL53A Welding Metallurgy
0 Units
Lecture: 54

Designed for students seeking a career in welding and welding inspection. Covers structure of matter, chemical, physical, and mechanical properties of metals, principles of alloying, solid state diffusion, plastic deformation, and heat treatment.

VOC WL60 Print Reading and Computations for Welders
0 Units
Lecture: 54

Reading prints and performing computations for welding fabrication operations. Interpreting and visualizing prints, title blocks, welding symbols, specifications, notes, and bills of materials. Computations necessary to calculate materials, costs, sizes, and fractional, decimal, and metric conversions.

VOC WL70A Beginning Arc Welding
0 Units
Lecture: 18 Lab: 108

Develops manipulative skills and techniques for shielded metal arc (SMAW) and flux cored arc (FCAW) welding processes in the flat and horizontal positions using AC and DC welding currents on carbon steel.

VOC WL70B Intermediate Arc Welding
0 Units
Lecture: 18 Lab: 108

Welding high alloy steel with both Shielded Metal Arc (SMAW) and Flux Core Arc (FCAW) welding processes in the vertical and overhead positions with an introduction to Gas Metal Arc (GMAW) and Gas Tungsten (GTAW) welding.

VOC WL70C Certification for Welders
0 Units
Lecture: 18 Lab: 108

Building construction for the advanced arc welding student. Special emphasis will be placed on welding symbols and the American Welding Society's (AWS) D1.1 and D1.3.

VOC WL80 Construction Fabrication and Welding
0 Units
Lecture: 18 Lab: 108

Theory and practical applications of welding used in industry and construction. Designed to adapt and upgrade skills to industry standards and develop fabrication skills to supplement and augment welding skills. Includes project models such as ornamental iron gates and fences and material storage components.

VOC WL81 Pipe and Tube Welding
0 Units
Lecture: 18 Lab: 108

Welding in all positions as applied to the pipe industry. Welding processes include shielded metal arc welding (SMAW), gas tungsten arc welding (GTAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW) using a variety of materials and configurations on subcritical and critical piping and tubing.

VOC WL90A Gas Tungsten Arc Welding
0 Units
Lecture: 18 Lab: 108

Advanced Gas Tungsten Arc Welding (GTAW) or tungsten inert gas (TIG) of steel, aluminum, corrosion resisting steel (CRES), and exotic metals. All position welds with many surfaces and transitions.

VOC WL90B Semiautomatic Arc Welding Process
0 Units
Lecture: 18 Lab: 108

Semiautomatic Welding Processes including Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), Submerged Arc Welding (SAW) with solid and tubular wires with and without gas shielding. All position welds with many varying thickness will be covered.

VOC WL91 Automotive Welding, Cutting and Modification
0 Units
Lecture: 18 Lab: 108

This course covers the welding and cutting of metals used in fabrication in the automotive industry. Gas metal arc (GMAW/MIG), gas tungsten arc (GTAW/TIG), plasma arc cutting (PAC), and oxy-fuel cutting (OFC) and welding will be demonstrated as they are used in the automotive industry, with an emphasis placed on specific applications and situational uses of each of these processes.

VOC WLD01 Welding Basics
0 Units
Lecture: 30-90 Lab: 30-90

Fundamentals of welding processes including Oxyfuel, Shielded Metal Arc, and Gas Metal Arc welding. Welding processes related to the areas of fabrication, construction, machine tool, aerospace, and the transportation industries. Focus on use of welding tools and safety in the industry.