

# CONSTRUCTION TECHNOLOGY

## **CT V12 - ADVANCED BLUEPRINT READING: COMMERCIAL/INDUSTRIAL - 3 Units**

Recommended preparation: ARCH V11 or CT V20 or DRFT V02B or equivalent

Hours: 3 lecture weekly

This is an advanced blueprint reading course for inspectors, contractors and designers interested in commercial and industrial construction. This course will provide training in blueprint reading comprehension, system assemblies, and material specifications. Subjects to be covered will include soils, foundations, site work, concrete, masonry, structural steel, welding, mechanical and electrical systems.

Same as ARCH V12. Transfer credit: CSU; credit limitations - see counselor.

## **CT V20 - BLUEPRINT READING: ARCHITECTURAL/CONSTRUCTION - 3 Units**

Hours: 3 lecture weekly

This course provides experience in construction blueprint reading and plan review. Experiences will include the study of lines, symbols, notations and dimensions used on architectural drawings. Code interpretation and design compliance will be stressed.

Field trips may be required. Formerly CT 20. Same as ARCH V11 & DRFT V02B. Transfer credit: CSU; credit limitations - see counselor.

## **CT V30 - WOODWORKING - 3 Units**

Hours: 6 lecture-laboratory weekly

This course is offered in a woodworking shop facility. The course is a study of operations commonly performed in furniture and cabinet shops. Subjects will include material selection, project design, wood fabrication, assembly methods and finishing procedures. Students will work on individual woodworking projects as they learn both shop safety and craftsmanship.

Fees will be required. May be taken for a maximum of 4 times. Transfer credit: CSU.

## **CT V37 - LANDSCAPE CONSTRUCTION - 3 Units**

Hours: 2 lecture, 3 laboratory weekly

In this course, students will gain practical field experience in installing landscape planting and irrigation systems. Proper use of typical construction materials, tools, and power equipment will be emphasized. Actual projects may include decks, patios, overheads, benches, walls, fences, walks, low voltage lighting, water elements and grading. California licensing, contracts and codes will be reviewed.

Transfer credit: CSU; credit limitations - see counselor.

## **CT V40 - ICBO BUILDING CODE CERTIFICATION PREPARATION - 2 Units**

Recommended preparation: ARCH V59 or CT V59 or 2 years of experience using the Uniform Building Code

Hours: 2 lecture weekly

The course will provide a review of the Uniform Building Code and focus on information necessary to pass the International Conference of Building Officials (I.C.B.O.) certification exam. This I.C.B.O. exam is required for employment as a building or combination inspector.

Field trips may be required. May be taken for a maximum of 2 times. Formerly CT 40.

## **CT V41 - IAPMO PLUMBING CODE CERTIFICATION PREPARATION - 2 Units**

Recommended preparation: CT V71 or 2 years of experience using the Uniform Plumbing Code

Hours: 2 lecture weekly

This course will provide a review of the Uniform Plumbing Code and focus on information necessary to pass the International Association of Plumbing and Mechanical Officials (IAPMO) plumbing certification exam. Certification is required for employment as a plumbing or combination inspector.

Formerly CT 41.

## **CT V42 - IAPMO MECHANICAL CODE CERTIFICATION PREPARATION - 2 Units**

Recommended preparation: CT V72 or 2 years of experience using the Uniform Mechanical Code

Hours: 2 lecture weekly

This course will provide a review of the Uniform Mechanical Code and focus on information necessary to pass the International Association of Plumbing and Mechanical Officials (IAPMO) mechanical certification exam. Certification is required for employment as a mechanical or combination inspector.

Formerly CT 42.

## **CT V43 - ELECTRICAL CODE CERTIFICATION PREPARATION - 2 Units**

Recommended preparation: CT V66 or 2 years of experience using the National Electrical Code

Hours: 2 lecture weekly

This course will provide a review of the National Electrical Code and focus on information necessary to pass the International Code Conference (ICC), International Association of Electrical Inspectors (IAEI) and Division of Apprenticeship Standards (DAS) certification exams. Successful passage of certification exams is required for employment as electricians or electrical inspectors.

Formerly CT 43.

## **CT V45 - ICBO PLANS EXAMINER CERTIFICATION PREPARATION - 2 Units**

Recommended preparation: ARCH V59 or CT V59 or 2 years plan checking experience

Hours: 2 lecture weekly

This course is an introduction to nonstructural plan checking and review for the International Conference of Building Officials (I.C.B.O.) "Plans Examiner" certification examination. The course will cover advanced material contained in the Uniform Building Code.

Field trips may be required. May be taken for a maximum of 2 times. Formerly CT 45.

## **CT V46 - BUILDING PERMIT TECHNICIAN - 2 Units**

Hours: 2 lecture weekly

This course is an introduction to the duties and responsibilities of a Building Department Permit Technician. Subjects to be studied will include building and zoning code regulations, construction plans and documents, permit fee schedules and permit processing. This course will help students prepare for industry certification as a Permit Technician.

## **CT V47 - BUILDING AND ZONING CODE ENFORCEMENT - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to building and zoning code enforcement. Code enforcement is the study of community regulatory standards pertaining to housing and commercial development. Subjects to be studied will include state codes, duties of enforcement officers, professional certification, and career opportunities.

Same as CJ V47.

### **CT V50 - CONSTRUCTION CONTRACTOR LICENSE PREPARATION - 3 Units**

Hours: 3 lecture weekly

This course provides preparation for the California General Contractor's License exam. Law subjects and trade subjects will be studied through lectures and practice exams. State licensing requires four years of construction experience or a combination of education and experience.

Field trips may be required. May be taken for a maximum of 2 times. Formerly CT 50.

### **CT V52 - PROPERTY INSPECTION - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to real estate property inspection. Topics covered include foundations, roofing, utility systems, common defects, building codes, business liability, and industry licensing. This course is intended for individuals interested in buying property, property managers, property inspectors and those seeking a broad knowledge of construction.

### **CT V58 - INTERNATIONAL RESIDENTIAL CODE - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to the International Residential Code (IRC). Students will learn interpretation and use of the residential building code as it applies to current construction. Design criteria and inspection processes will be emphasized. Course content will include information related to residential code certification for inspectors and designers. Topics of instruction will follow the content of the most recent IRC as published by the International Code Council (ICC).

Same as ARCH V58. Transfer credit: CSU; credit limitations - see counselor.

### **CT V59 - INTERNATIONAL BUILDING CODE - 3 Units**

Hours: 3 lecture weekly

This is an introduction to the International Building Code (IBC), as published by the International Code Council (ICC). The IBC is the building code used for commercial and industrial structures. Subjects to be covered will include structural design requirements, inspection procedures, code comprehension and ICC inspector certification.

CT V59/ARCH V59 may be taken in any combination for a maximum of 4 times. Formerly CT 59. Same as ARCH V59. Transfer credit: CSU; credit limitations - see counselor.

### **CT V60 - SIMPLIFIED ENGINEERING FOR BUILDING CONSTRUCTION - 3 Units**

Hours: 3 lecture weekly

This is an introductory course designed to give the student an overview of basic construction engineering principles. This course will study subjects such as live and dead loads, uniform and concentrated loads, footing and foundation design, post and beam sizing, shear transfer, load path transfer, building material selection, connection methods and other aspects of structural design.

Formerly CT 60. Same as ARCH V60. Transfer credit: CSU; credit limitations - see counselor.

### **CT V61 - PUBLIC WORKS CONSTRUCTION - 3 Units**

Hours: 3 lecture weekly

This course will provide an introduction to public works construction and inspection. Subjects to be studied will include soil mechanics, geological reports, land development, site preparation, foundation design, drainage control and underground utilities.

Field trips may be required. Formerly CT 61.

### **CT V62 - STRUCTURAL MASONRY CONSTRUCTION - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to structural masonry construction. Subjects to be studied will include brick and block construction, mortar types, grouting requirements and reinforcements. This course will stress construction methods, building materials and the inspection process. This course will also help students prepare for industry certification exams. No prior experience is necessary.

Field trips may be required. May be taken for a maximum of 2 times. Formerly CT 62.

### **CT V63 - REINFORCED CONCRETE CONSTRUCTION - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to basic soil mechanics and reinforced concrete and masonry construction. Subjects to be studied include: soil composition, soil strength factors, the different types of brick block masonry construction, concrete construction and Portland cement composition. This course will stress construction methods, building materials and the inspection process.

Field trips may be required. May be taken for a maximum of 2 times. Formerly CT 63.

### **CT V64 - BUILDING CONSTRUCTION: MATERIALS AND METHODS - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to residential and light commercial building construction, including materials, foundations, framing, roof and stair cutting, drywall, finish work and building codes. This course is intended to serve as an overview of the construction process.

Field trips may be required. Formerly CT 64. Same as ARCH V64. Transfer credit: CSU; credit limitations - see counselor.

### **CT V65 - STRUCTURAL STEEL AND WELDING CONSTRUCTION - 3 Units**

Hours: 3 lecture weekly

This course is a study of structural steel and welding use in building construction. Building types, grades of materials, assembly methods, blueprint reading and other subjects will be studied. The course is intended for inspectors, project supervisors and construction workers. The course will also help prepare students for related industry certifications.

Field trips may be required. CT V65/WEL V65 may be taken in any combination for a maximum of 2 times. Formerly CT 65. Same as WEL V65.

### **CT V66 - NATIONAL ELECTRICAL CODE - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to the National Electrical Code. The Code layout and content will be the focus of study. Subjects covered will include vocabulary, service, circuits, conduits, conductors and system inspection.

Field trips may be required. May be taken for a maximum of 3 times. Formerly CT 66.

**CT V67 - BUILDING ACCESSIBILITY REGULATIONS - 2 Units**

Hours: 2 lecture weekly

This course is a study of California and federal regulations, such as the Americans with Disabilities Act (ADA) and California Title 24 Regulations, which cover building accessibility for disabled persons. Both public and private buildings will be studied as well as parking, exterior routes of travel, entrances, exits and other accommodations. This course is intended for building designers as well as contractors and inspectors. This course will also help prepare students for industry certification.

Formerly CT 67. Same as ARCH V67.

**CT V68 - STATE ARCHITECT (DSA) PROJECT INSPECTOR CERTIFICATION - 3 Units**

Hours: 3 lecture weekly

This course is designed for individuals seeking Division of the State Architect (DSA) Project Inspector certification. DSA is responsible for government and school construction. This course will describe the qualifications, application and testing procedures required for the different levels of DSA certification. Inspectors and superintendents wanting to work on government projects are required to be DSA certified.

**CT V69 - CALIFORNIA ENERGY REGULATIONS - 2 Units**

Hours: 2 lecture weekly

This course is a study of the state of California Energy Standards. The course will also study the mandatory energy conservation requirements in residential construction per Title 24. The course will include an introduction to computer software used for energy compliance.

Field trips may be required. May be taken for a maximum of 3 times. Formerly CT 69.

**CT V71 - UNIFORM PLUMBING CODE - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to the Uniform Plumbing Code. The Code layout and content will be the focus of study. Subjects to be covered will include vocabulary, water supply systems, waste drainage, construction materials and code inspection. A prior understanding of plumbing systems is preferred.

Field trips may be required. May be taken for a maximum of 3 times. Formerly CT 71.

**CT V72 - UNIFORM MECHANICAL CODE - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to the Uniform Mechanical Code. The Code layout and content will be the focus of study. Subjects to be covered will include vocabulary, materials, methods used in heating, air conditioning and ventilation systems. Code problems and the inspection of mechanical systems will be emphasized. A prior understanding of HVAC system is preferred.

Field trips may be required. May be taken for a maximum of 3 times. Formerly CT 72.

**CT V75 - INTRODUCTION TO ELECTRICAL, PLUMBING AND MECHANICAL SYSTEMS - 3 Units**

Hours: 3 lecture weekly

This course is an introduction to residential and light commercial electrical, plumbing, heating, air conditioning and ventilation systems. Subjects to be studied will include vocabulary, equipment, materials, construction methods, system design, and basic inspection requirements.

Formerly CT 75. Same as ARCH V75. Transfer credit: CSU; credit limitations - see counselor.

**CT V76 - CONSTRUCTION JOB SITE MANAGEMENT - 3 Units**

Hours: 3 lecture weekly

This course covers the organization and problems associated with managing a construction job site. Topics will include plans, permits, inspections, material and workforce scheduling, industrial safety, construction process, cost control and quality management.

Transfer credit: CSU.

**CT V77 - CONSTRUCTION BUSINESS MANAGEMENT - 3 Units**

Hours: 3 lecture weekly

This course covers the organization and problems associated with managing a building construction business. Topics will include licensing, insurance, project financing, bidding, contracts, scheduling, safety and community relations.

Field trips may be required. Formerly CT 77. Transfer credit: CSU.

**CT V79 - CONSTRUCTION ESTIMATING - 3 Units**

Hours: 3 lecture weekly

This course stresses construction cost estimating through the analysis of blueprint drawings and the generation of labor and material takeoff lists. Topics will include materials, labor, overhead, profit and subcontractors. A prior understanding of the construction process is preferred.

Field trips may be required. Formerly CT 79. Transfer credit: CSU.

**CT V80 - COMPUTER APPLICATIONS FOR CONTRACTORS - 2 Units**

Recommended preparation: CT V79

Hours: 1 lecture, 3 laboratory weekly

This course is a survey of computer programs used in the construction industry. The student will review software used for cost estimating, project scheduling and office management. An understanding of construction cost estimating is recommended. No previous computer experience is required.

Field trips may be required. Formerly CT 80. Transfer credit: CSU.

**CT V84 - CONSTRUCTION SKILLS TRAINING - 3 Units**

Hours: 6 lecture-laboratory weekly

This is a hands-on construction skills training course. Students will design and construct various building projects that include concrete, carpentry, electrical, plumbing and other trades. Students will learn the proper selection of materials and the safe and proper use of tools and power equipment. Course content will focus on developing occupational, entry-level knowledge and abilities required for employment in the construction industry.

May be taken for a maximum of 4 times.

**CT V88 - CONSTRUCTION TECHNOLOGY WORKSHOPS - .5-10 Units**

Prerequisite: varies with topic

Hours: lecture and/or laboratory as required by unit formula

Designed to meet specific needs of the college and community, as required and requested by persons whose needs in this area are not met by present course offerings.

Fees may be required. Courses with same title may not be repeated; may be taken for a maximum of 4 times. Formerly CT V89.

## **CT V95 - CONSTRUCTION TECHNOLOGY**

### **INTERNSHIP I - 1-4 Units**

Corequisite: enrolled in a minimum of 7 units to include internship  
Recommended preparation: completion of or concurrent enrollment in one course in the discipline  
Hours: 60 per unit

This construction technology internship course offers students who are volunteers (unpaid) an opportunity to obtain work experience related to their field of study. Students are accepted as a result of consultation with a designated faculty member in the discipline and the acceptance of an approved work proposal.

Field trips will be required. May be taken for a maximum of 4 times not to exceed 16 units total in combination with any other work experience/internship courses. Offered on a credit/no credit basis only. Transfer credit: CSU; credit limitations - see counselor.

## **CT V96 - CONSTRUCTION TECHNOLOGY**

### **INTERNSHIP II - 1-4 Units**

Corequisite: enrolled in a minimum of 7 units to include internship  
Recommended preparation: completion of or concurrent enrollment in one course in the discipline  
Hours: 75 per unit

This construction technology internship course offers students who are employed in the field an opportunity to expand their work experience related to their field of study. Students are accepted as a result of consultation with a designated faculty member in the discipline and the acceptance of an approved work proposal.

Field trips will be required. May be taken for a maximum of 4 times not to exceed 16 units total in combination with any other work experience/internship courses. Offered on a credit/no credit basis only. Transfer credit: CSU; credit limitations - see counselor.