

BUS 80 Business Law

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU, UC; CAN:BUS12

Introduction to the law applicable to business institutions and their operations; social forces and their effect upon the development of law; sources of law, agencies for enforcement, and court procedure and administration agencies. Substantive law, that law which includes rights and duties, will include contracts, agency employment relationships, torts and crimes. This course has the option of a letter grade or pass/no pass. Previously listed as GBUS 80. **ADVISORY:** Eligible for English 250 and English 260.

BUS 100 Business Correspondence

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU

Development of business writing techniques and English usage skills for effective communication through various forms of business correspondence. Emphasizes the public relations function of correspondence; covers a review of grammar, punctuation, and job application techniques. This course has the option of a letter grade or pass/no pass. Previously listed as GBUS 100. **ADVISORY:** CSIS 122, 126 or equivalent; Eligible for English 1A;

BUS 102 Business Mathematics

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU

Basic concepts of business mathematics with emphasis on problem solving. Covers arithmetic fundamentals, business applications, percentages, merchandising, accounting, and measuring business performance and success. This course has the option of a letter grade or pass/no pass. Previously listed as GBUS 102. **ADVISORY:** Eligible for Mathematics 402 and English 260.

BUS 190 Occupational Work Experience General Business

Units: 1.0 TO 4.0 **Hours:** 5.0 TO 20.0 Laboratory
Transferable: CSU

College credit for learning experience obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student. 75 hours per semester per unit or 60 hours per semester for unpaid experience. This is a pass/no pass course. May be taken for a maximum of 16 work experience units. Previously listed as GBUS 190. **REQUIRED:** Declared vocational major. Concurrent enrollment in seven or more units (including CWE units, except for summer school. For summer school enrollment in one other class is required.) Minimum 2.00 G.P.A.

CARPENTRY**CARP 201 Worker Safety and Tool Skills**

Units: 1.5 **Hours:** 18.0 lecture 18.0 Laboratory
Transferable: No

This course will examine possible hazards of the construction site and the methods used to protect the worker from those hazards. Students will become familiar with California workplace safety regulations designed to protect the worker from the hazards of employment. And students will gain the experience necessary to safely use a selected group of power tools. May be repeated once for credit.

CARP 202 The Apprentice Carpenter and the Trade

Units: 2.0 **Hours:** 36.0 Lecture
Transferable: No

This course covers the history of carpenter apprenticeship and the trade. Topics include wages and benefits, worker's compensation, job placement, collective bargaining, working conditions, and labor-management relations as they pertain to unions, contractors, and cooperatives. May be repeated once for credit.

CARP 203 Construction Math and Introduction to Working Drawings

Units: 2.0 **Hours:** 30.0 lecture 6.0 Laboratory
Transferable: No

This course covers mathematics applications to the construction trade with specific focus on mathematical processes in carpentry. Topics include an introduction to elements of working drawings used in the construction process. May be repeated once for credit.

CARP 204 Foundations and Floors

Units: 1.0 **Hours:** 6.0 lecture 30.0 Laboratory
Transferable: No

This course covers layout, forming, and framing of foundations, joist and sub-flooring construction. May be repeated once for credit.

CARP 205 Residential Blueprint Reading

Units: 2.5 **Hours:** 30.0 lecture 6.0 Laboratory
Transferable: No

This course is an introduction to residential blueprints. Topics include conventions, lines, symbols, measurements, and specifications used for residential construction. May be repeated once for credit.

CARP 206 Structural Framing

Units: 1.0 **Hours:** 6.0 lecture 30.0 Laboratory
Transferable: No

This course covers basic framing systems and layout of walls, ceilings and stairwells. May be repeated once for credit.

CARP 207 Form Detailing, Construction and Erection

Units: 1.0 **Hours:** 6.0 lecture 30.0 Laboratory
Transferable: No

This course covers planning and building of form work, construction and erection of various concrete forms, and construction materials and methods. May be repeated once for credit.

CARP 208 Exterior Finish

Units: 1.0 **Hours:** 6.0 lecture 30.0 Laboratory
Transferable: No

This course covers exterior design, materials, and methods of application and finishes in building construction. Students will complete the tasks required in planning and installing exterior finish and trim materials in a safe and efficient manner. May be repeated once for credit.

CARP 209 Blueprint Reading - Commercial and Industrial

Units: 2.0 **Hours:** 30.0 lecture 6.0 Laboratory
Transferable: No

This course is an introduction to commercial and industrial blueprints. Topics include conventions, lines, symbols, measurements, and specifications used for commercial and industrial construction. Complete construction material take-off calculations commonly used on the job. May be repeated once for credit.

CARP 210 Concrete - Precast & Prestressed

Units: 1.0 **Hours:** 6.0 lecture 30.0 Laboratory
Transferable: No

This course covers concrete components and the effect of component proportions on the workability and strength of concrete. The type of cement and admixtures to use in a given situation are discussed. Detail and build tilt-up panel forms. Construct a bridge deck and the forms for a box beam girder. May be repeated once for credit.

CARP 211 Interior Finish**Units:** 1.0 **Hours:** 6.0 lecture 30.0 Laboratory**Transferable:** No

This course covers interior designs, materials, and methods of application in building construction. Students will complete the tasks required in planning and installing interior materials in a safe and efficient manner. May be repeated once for credit.

CARP 212 Level and Layout Instruments**Units:** 1.0 **Hours:** 24.0 lecture 12.0 Laboratory**Transferable:** No

This course covers use of leveling devices. It includes reading and interpreting an engineer's rod, horizontal and vertical setting circles, and vernier scale. Additional topics include construction layout of horizontal and vertical angles. May be repeated once for credit.

CARP 213 Engineered Structural Systems**Units:** 1.0 **Hours:** 6.0 lecture 30.0 Laboratory**Transferable:** No

This course covers the design of heavy timber construction, lamination, dams, bridges and trusses. Construct, in proper sequence, a panel roof system having hinge connectors, steel caps, beam seats, and sawn lumber roof members. Construct a truss roof system. Tie the basic knots used in rigging. Direct a crane using university recognized hand signals. May be repeated once for credit.

CARP 214 Interior Systems**Units:** 1.0 **Hours:** 6.0 lecture 30.0 Laboratory**Transferable:** No

This course is a comprehensive study of materials, work processes and the proper use of tools necessary to install layout and material application for metal framing, drywall, suspended ceilings, metal frames and doors, door hardware, and access floors. May be repeated once for credit.

CARP 215 Stair Building**Units:** 1.0 **Hours:** 6.0 lecture 30.0 Laboratory**Transferable:** No

This course covers types, designs, nomenclature and Uniform Building Codes requirements for building stairs. Topics include mathematical calculations and layout procedures, constructing stairs, landings, newels and handrails. May be repeated once for credit.

CARP 216 Roof Framing**Units:** 1.0 **Hours:** 6.0 lecture 30.0 Laboratory**Transferable:** No

This course covers roof framing, layout and construction. Topics include planning and building several styles of roofs using accepted terminology, technical information, construction materials and methods, and meeting accepted industry standards. May be repeated once for credit.

CARP 217 Introduction to Welding and Cutting**Units:** 1.0 **Hours:** 6.0 lecture 30.0 Laboratory**Transferable:** No

This course covers welding methods, brazing, flame cutting, and shielded arc welding. Topics include thermo forming and thermo setting plastics applicable to the building construction industry. Perform basic welding tasks in a safe manner. May be repeated once for credit.

CARP 290 Occupational Work Experience/Carpenter**Units:** 1.0 TO 4.0 **Hours:** 5.0 TO 20.0 Laboratory**Transferable:** No

College credit for learning experience obtained on the job in accordance with a training plan developed cooperatively between the employer, college and student. 75 hours per semester per unit or 60 hours per semester for unpaid experience. This is a pass/no pass course. May be taken for a maximum of 16 work experience units. **PREREQUISITES:** Required: Declared vocational major. Concurrent enrollment in seven or more units (including CWE units, except for summer school. For summer school, enrollment in one other class is required). Minimum 2.00 G.P.A.

Ceramics: see Art**CHEMISTRY****CHEM 1A General Chemistry****Units:** 5.0 **Hours:** 4.0 lecture 3.0 Laboratory**Transferable:** CSU, UC; CSU-GE:B1, B3, IGETC:5A; GAV-GE:B1, B3; CAN:CHEM2, CHEM SEQ A

This is the first semester of a year-long general chemistry course designed for science, engineering and pre-professional majors. Topics include properties of matter, atomic structure, the Periodic Table, stoichiometry, elements and compounds, bonding, molecular structure, chemical reactions, states of matter, as well as the properties of gases and solutions. **PREREQUISITE:** Chemistry 30A with a grade of 'C' or better, or high school chemistry with a grade of 'B' or better completed within the last five years, and Mathematics 233 with a grade of 'C' or better. **ADVISORY:** Eligible for English 250 and English 260.

CHEM 1B General Chemistry**Units:** 5.0 **Hours:** 4.0 lecture 3.0 Laboratory**Transferable:** CSU, UC; CSU-GE:B1, B3, IGETC:5A; GAV-GE:B1, B3; CAN:CHEM4, CHEM SEQ A

This is the second semester of a year-long general chemistry course designed as a continuation of Chemistry 1A. Topics include solutions, thermodynamics, chemical kinetics, the equilibria of acids and bases, solubility systems, complex ions, electrochemistry, the chemistry of metals and nonmetals, as well as nuclear chemistry. **PREREQUISITE:** Chemistry 1A with a grade of C or better.

CHEM 12A Organic Chemistry**Units:** 5.0 **Hours:** 3.0 lecture 6.0 Laboratory**Transferable:** CSU, UC; CSU-GE:B1, B3, IGETC:5A; GAV-GE:B1, B3

This is the first semester of a year-long organic chemistry course designed for chemistry majors, pre-professional medical, biology, and science majors. Topics include nomenclature, stereochemistry, mechanisms, reactions and spectroscopic studies of organic compounds. Lecture and laboratory methods will focus on synthesis, isolation, purification, elucidation, and identification of organic structures, as well as instrumental methods and data interpretation. **PREREQUISITE:** Chemistry 1B

CHEM 12B Organic Chemistry**Units:** 5.0 **Hours:** 3.0 lecture 6.0 Laboratory**Transferable:** CSU, UC; CSU-GE:B1, B3, IGETC:5A; GAV-GE:B1, B3

This is the second semester of a year-long organic chemistry course designed as a continuation of Chemistry 12A. Topics include nomenclature, stereochemistry, mechanism, reactions, and spectroscopic studies of the various organic functional groups. Lecture and laboratory methods will focus on synthesis, isolation, purification, elucidation and identification of organic structures as well as instrumental methods and data interpretation. **PREREQUISITE:** Chemistry 12A

CHEM 30A Elementary Chemistry**Units:** 4.0 **Hours:** 3.0 lecture 3.0 Laboratory**Transferable:** CSU, UC; CSU-GE:B1, B3, IGETC:5A; GAV-GE:B1, B3; CAN:CHEM6, CHEM SEQ B

This is a first semester college chemistry course designed for majors preparing to take Chemistry 1A, nursing and allied health students, as well as general education. The course will cover the principles of chemistry including properties of matter, energy, atomic theory, the Periodic Table, stoichiometry, elements and compounds, the properties of bonding, molecular structure, chemical reactions, states of matter, acidity, solutions and gases, as well as an introductory to organic chemistry. **ADVISORY:** Mathematics 205; eligible for English 250 and English 260.

CHEM 30B Elementary Organic and Biochemistry**Units:** 4.0 **Hours:** 3.0 lecture 3.0 Laboratory**Transferable:** CSU, UC; CSU-GE:B1, B3, IGETC:5A; GAV-GE:B1, B3; CAN:CHEM8, CHEM SEQ B

This is the second semester of a year-long elementary chemistry course designed as a continuation of Chemistry 30A. It is designed for science majors, nursing and allied health students. The course will cover the principles of organic and biochemistry including hydrocarbons, alcohols, aldehydes and ketones, carboxylic acids, amines and amides, carbohydrates, lipids, proteins and their functions in physiological systems, as well as organic chemical reactions. **PREREQUISITE:** Chemistry 30A with a grade of C or better.

