

- CFT 178 Lathe III - Advanced Turning** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 177
Transfer acceptability: CSU
Continuation of Lathe II - Intermediate Turning. Exploration of techniques and material in-depth, and focus on mastery.
- CFT 180 Wood Bending and Lamination/ Wood Technology** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 105
Transfer acceptability: CSU
Principles and practical applications of both wood bending and lamination. Mechanical and chemical means of bending wood studied and developed, specific structure and properties of wood are developed.
- CFT 182 Timber Framing Technology** (3, 4, 5)
1½, 2, or 2½ hours lecture - 4½, 6, or 7½ hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 100
Transfer acceptability: CSU
Timber framing is one of the oldest building systems in the world. Structures are created utilizing heavy timbers jointed via pegged mortise and tenon joints. This course teaches how to design and engineer a modern timber frame using energy efficient systems. Introduction to engineering principles, analyzing loads, architectural design, and layout. In this hands-on class students will build a timber frame structure. The class structure will be rigged and raised by students.
- CFT 185 Machine Tool Set up and Maintenance** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 100
Transfer acceptability: CSU
Set up, repair, rebuild, and maintain tools and machines used in the wood-related industries. Machine tool operations studies and applied. Consumer information developed to acquaint student with machines and tools within the field. Planned maintenance schedules developed and applied.
- CFT 186 Machine Tool/Production Carving** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 105
Transfer acceptability: CSU
Introductory woodcarving course using hand and power machine tools. Design considerations, carving techniques, production carving, and incorporation of woodcarving into cabinetmaking, furniture construction, and architectural millwork.
- CFT 187 Introduction to Carving** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Transfer acceptability: CSU
This beginning course in carving introduces students to the tools and techniques used in carving wood. The course includes specifics of available tools, their proper handling and maintenance, as well as discussions of layout and carving methods as applied to furniture and architectural millwork.
- CFT 188 Intermediate Carving** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 187
Transfer acceptability: CSU
Examines methods relating to both low and high relief carving, as well as incised lettering. More complex layout and carving techniques are undertaken. Concepts such as setting-in and blocking-out are introduced while modeling, introduced in the beginning course, is more fully developed.
- CFT 189 Advanced Carving** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Transfer acceptability: CSU
Advanced carving is a topical study of specific carving applications as they relate to furniture or architectural millwork. Topics are largely gathered from period styles and may include ball and claw feet, Newport shells, and Philadelphia rococo, as well as contemporary interpretations, Art Nouveau, and maritime themes. See Class Schedule for specific period styles/themes to be emphasized.
- CFT 190 Specialty and Manufactured Hardware** (.5, 1, 2, 3)
½, 1, 2, or 3 hours lecture
Transfer acceptability: CSU
Survey of traditional, contemporary, European, and Oriental market hardware found in the cabinet and furniture industries, including consumer applications. Exploration and application of various system solutions for given problem(s). Study and application of hinges, K D fasteners, fastening systems, joint systems, drawer guides, and runners.
- CFT 195 Finishing Technology/Touch Up and Repair** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 100
Transfer acceptability: CSU
Finishes as used in the wood-related fields. Study and use of penetrating, surface, epoxy, catalytic, and resin surface finishes. Preparation to include staining, filling, and glazing. Chemistry of lacquers, urethanes, oils, and enamels. Instruction and practice in the touch-up of existing finishes through use of French polishing, burn-in sticks, and dry aniline staining. Repair of fine furniture as necessary prior to finishing.
- CFT 196 Special Problems in Cabinet and Furniture Technology** (1, 2, 3, 4, 5, 6)
3, 6, 9, 12, 15, or 18 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 100 or 105
Transfer acceptability: CSU
A research course through individual contract concentrating in the area of Cabinet and Furniture Technology.
- CFT 197 Cabinet and Furniture Technology Topics** (.5 - 4)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.
Transfer acceptability: CSU
Topics in Cabinet and Furniture Technology. See class schedule for specific topic covered. Course title will designate subject covered.
- CFT 198 Advanced Wood Finishing** (2, 3, 4)
1, 1½, or 2 hours lecture - 3, 4½, or 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 195
Transfer acceptability: CSU
Wood finishing history, processes, and application of multiple colors and complex finishes on furniture. Topics include media, solvents and tools used to apply media, faux finishes, gilding, coloring the finishing materials, turning broken or missing parts, and veneer repair.
- CFT 295 Directed Study in Woodworking** (1, 2, 3, 4, 5, 6)
48, 96, 144, 192, 240, or 288 hours laboratory
Prerequisite: A minimum grade of 'C' in CFT 105
Transfer acceptability: CSU
Independent study in furniture making, cabinet making, shop layout, design, operation, and maintenance for students who have demonstrated advanced skills and/or proficiencies in Cabinet and Furniture Technology subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Registration requires prior approval of supervising instructor.

Chemistry (CHEM)

Contact the Chemistry Department for further information.
(760) 744-1150, ext. 2505
Office: NS-355B

Associate in Science Degrees -

AS Degree requirements are listed in Section 6 (green pages).
• Chemistry

Certificates of Achievement -

Certificate of Achievement requirements are listed in Section 6 (green pages).
• Chemistry

PROGRAM OF STUDY

Chemistry

Provides the background to begin upper division course work and prepares the student for entry level jobs that require a knowledge of chemistry. The student is advised to check with the institution to which he/she wishes to transfer for additional courses, which may be required.

A.S. DEGREE MAJOR OR
CERTIFICATE OF ACHIEVEMENT

| Program Requirements | | Units |
|----------------------|------------------------------|-----------|
| CHEM 110 | General Chemistry | 3 |
| CHEM 110L | General Chemistry Laboratory | 2 |
| CHEM 115 | General Chemistry | 3 |
| CHEM 115L | General Chemistry Laboratory | 2 |
| CHEM 210 | Analytical Chemistry | 5 |
| CHEM 220 | Organic Chemistry | 5 |
| CHEM 221 | Organic Chemistry | 5 |
| TOTAL UNITS | | 25 |

COURSE OFFERINGS

Courses numbered under 50 are non-degree courses.
Courses numbered under 100 are not intended for transfer credit.

CHEM 10 Chemistry Calculations (1)

1 hour lecture

Note: Pass/No Pass grading only

Non-degree Applicable

The basic calculation skills needed for successful performance in CHEM 100, 110, and 115. Areas such as significant figures, exponential numbers, and basic chemical problems are discussed. Emphasizes student practice of chemistry problems.

CHEM 100 Fundamentals of Chemistry (4)

3 hours lecture - 3 hours laboratory

Prerequisite: One year of high school algebra

Transfer acceptability: CSU; UC – no credit if taken after CHEM 110

Introductory study of the principles and laboratory techniques of general chemistry. Laboratory must be taken concurrently with lecture.

CHEM 104 General Organic and Biochemistry (5)

3 hours lecture - 6 hours laboratory

Transfer acceptability: CSU; UC

This course will cover the basic principles of general chemistry, organic chemistry and biochemistry as needed to understand the biochemistry, physiology, and pharmacology of the human body. This course is intended mainly for students pursuing health professions.

CHEM 105 Fundamentals of Organic Chemistry (4)

3 hours lecture - 3 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 100, or CHEM 110 and 110L

Transfer acceptability: CSU; UC

An introduction to the study of organic chemistry with an emphasis on classification, reactions, and application to allied fields. Laboratory includes techniques of isolation, identification, and synthesis of organic compounds.

CHEM 110 General Chemistry (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in CHEM 100 or high school chemistry with laboratory, and two years of high school algebra or MATH 60

Corequisite: CHEM 110L

Transfer acceptability: CSU; UC

Principles of, and calculations in, areas such as atomic structure, solutions, chemical bonding, chemical formulas and equations, gases, energy transformations accompanying chemical changes, and descriptive chemistry.

CHEM 110L General Chemistry Laboratory (2)

6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 110, or concurrent enrollment in CHEM 110

Transfer acceptability: CSU; UC

Qualitative and quantitative investigations designed to accompany CHEM 110.

CHEM 115 General Chemistry (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in CHEM 110 and 110L

Recommended preparation: Concurrent enrollment in CHEM 115L

Transfer acceptability: CSU; UC

Principles of, and calculations in, areas such as reaction spontaneity, energy changes accompanying chemical reactions, rates of reactions, chemical equilibrium, acids and bases, precipitation reactions, complex ions, oxidation and reduction, nuclear reactions, and descriptive chemistry.

CHEM 115L General Chemistry Laboratory (2)

6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 110 and 110L; A minimum grade of 'C' in CHEM 115, or current enrollment in CHEM 115

Transfer acceptability: CSU; UC

Qualitative and quantitative investigations designed to accompany CHEM 115.

CHEM 197 Chemistry Topics (.5 - 4)

Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.

Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus.

Topics in Chemistry. See Class Schedule for specific topic offered. Course title will designate subject covered.

CHEM 205 Introductory Biochemistry (3)

3 hours lecture

Prerequisite: A minimum grade of 'C' in CHEM 105

Transfer acceptability: CSU; UC

Fundamental principles of the chemistry of living systems, including structure and function of proteins, nucleic acids, carbohydrates, and lipids. Emphasis on metabolism, energy storage and utilization.

CHEM 210 Analytical Chemistry (5)

3 hours lecture - 6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 115 and 115L

Transfer acceptability: CSU; UC

Principles, calculations, and applications of volumetric, gravimetric, and instrumental analysis. Practice in standardizing reagents and determining the composition of samples of various materials.

CHEM 220 Organic Chemistry (5)

3 hours lecture - 6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 115 and CHEM 115L

Transfer acceptability: CSU; UC

Integrated treatment of organic chemistry including electronic and orbital theory with applications to carbon bonding, stereo chemistry, resonance theory, and reaction mechanisms of both aliphatic and aromatic compounds. Strong emphasis on organic nomenclature, reactions, preparations, and synthesis of organic compounds. Laboratory: Techniques and theories involved in organic reactions and preparations, qualitative organic analysis, and instrumental methods.

CHEM 221 Organic Chemistry (5)

3 hours lecture - 6 hours laboratory

Prerequisite: A minimum grade of 'C' in CHEM 220

Transfer acceptability: CSU; UC

Continuation of the integrated treatment of organic chemistry including electronic and orbital theory with applications to carbon bonding, stereo chemistry, resonance theory, and reaction mechanisms of both aliphatic and aromatic compounds. Strong emphasis on organic nomenclature, reactions, preparations, and synthesis of organic compounds. Laboratory: techniques and theories involved in organic reactions and preparations, qualitative organic analysis, and instrumental methods.

CHEM 295 Directed Study in Chemistry (1, 2, 3)
 3, 6, or 9 hours laboratory
Prerequisite: Approval of project or research by department chairperson
Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus.
 Independent study for students who have demonstrated skills and/or proficiencies in chemistry subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

Chicano Studies (CS)

See also Multicultural Studies

Contact the Multicultural Studies Department for further information.
 (760) 744-1150, ext. 2206
 Office: MD-354

COURSE OFFERINGS

- CS 100 Introduction to Chicano Studies** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 The development of contemporary Chicano culture including various pre Columbian and Hispanic cultures in Mexico and the Southwest. A cross disciplinary approach examines applicable methods and theories from sciences and humanities.
- CS 101 The Chicano in the United States** (3)
 3 hours lecture
Note: This course plus CS 102 meets the State requirement in American History and Institutions.
Transfer acceptability: CSU; UC
 An historical survey of the Mexican American/Chicano people in the United States. Emphasis on cultural and historical roots from pre Columbian times through the Spanish conquest period and subsequent cultural and racial mix, including the U.S. American culture in the Southwest.
- CS 102 The Chicano and the American Political System** (3)
 3 hours lecture
Note: This course plus CS 101 meets the State requirement in American History and Institutions.
Transfer acceptability: CSU; UC – CS 102, AS 110 and AIS 102 combined: maximum credit, one course
 A basic and practical approach to understanding and utilizing the American political system. Includes a critical evaluation of leading issues affecting Chicanos as well as a survey of social and political organizations within the community. A description and analysis of Federal, State, and local government.
- CS 105 Chicano Literature** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of Chicano literature from its pre-Columbian origins. Analyzes the identity conflicts resulting from the dual cultures of Mexican and American worlds through literary works. Introduces the student to the rich and culturally diverse Chicano and Chicana authors that reflect the literary traditions that have mirrored the Chicano-Mexican reality in the United States.
- CS 110 Contemporary Mexican Literature** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of Mexican novels, prose and poetry from the Mexican Revolution to the present. Major landmark novels of Mexico will be examined in their social and historical context. Designed to acquaint non-Spanish major students with Mexican thought, values, and literary heritage relative to world literature.
- CS 115 Literature of Latin America** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of Latin American Literature which covers several epochs, genres, authors, cultures, countries, and literary movements in Mexico, Central America, South America, and the Caribbean. Some countries will stand out more than others because of the accessibility of literary works in translation.
- CS 120 Introduction to Sociology of the Chicano** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 The Chicano and the Chicano community within contemporary American society seen from a sociological perspective. Includes socialization/accluturation of the Chicano and the Chicano's role in societal institutions - family, marriage, religion, education, and economics.
- CS 125 The History of Mexico** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 A survey of the political, economic, and cultural development of the Mexican people and nation from the pre Columbian period through the Revolution of 1910.
- CS 130 Contemporary Mexican Culture** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 In-depth study of contemporary Mexican culture from the twentieth century to the present. Through an interdisciplinary approach, explores multiple aspects of Mexico's current trends in the political, historical, social, and cultural realms. Includes the Mexican Revolution of 1910, Cristeros War, PRI's sphere of influence, student movements, Mexico's current political system, U.S.-Mexico relations, and Mexico's current transition towards democracy. Also includes different forms of cultural expressions such as literature, visual arts, film, song, and other written and multimedia sources.
- CS 135 Mexican Art History** (3)
 3 hours lecture
Transfer acceptability: CSU; UC
 Study of a broad spectrum of Mexico's arts through its literature, music, theatre, dance, and visual arts from pre-Columbian times to the present. Topics may include various musical and literary genres, folkloric dances, sculpture, and paintings. Designed to increase knowledge and appreciation of general Mexican arts and culture. Exploration of Mexican history and social development as it is expressed in its artwork. Highlights include analytical approaches to cultural syncretism as well as field trips to performances, film screenings, and exhibitions to galleries and museums.
- CS 155 Ancient Civilizations of Meso America** (3)
 3 hours lecture
Note: Cross listed as ANTH 155
Transfer acceptability: CSU; UC
 Civilizations of Pre Columbian Mexico and Central America with a focus on their origins and achievements.
- CS 161A Elementary Classical Nahuatl IA** (3)
 3 hours lecture
Note: Cross listed as AIS 161A
Transfer acceptability: CSU; UC
 This is an introductory course on the Classical Nahuatl language of the Aztec Empire. Students will acquire a basic knowledge of Nahuatl morphology and syntax.
- CS 161B Elementary Classical Nahuatl IB** (3)
 3 hours lecture
Note: Cross listed as AIS 161B
Transfer acceptability: CSU
 A continuation of AIS/CS 161A that reviews the phonology, morphology, syntax and grammar of the Nahuatl Language, with continued emphasis on culturally relevant terminology leading to increased proficiency in expressing basic concepts both orally and in writing.