Chemistry (CHEM)

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

Associate in Arts Degrees -
AA 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.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tr>
<td>CHEM 100</td>
<td>Fundamentals of Chemistry</td>
<td>(4)</td>
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<tr>
<td>CHEM 110</td>
<td>General Chemistry</td>
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<tr>
<td>CHEM 110L</td>
<td>General Chemistry Laboratory</td>
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<tr>
<td>CHEM 115</td>
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<td>CHEM 115L</td>
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<td>CHEM 210</td>
<td>Analytical Chemistry</td>
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<td>CHEM 220</td>
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</tr>
<tr>
<td>CHEM 221</td>
<td>Organic Chemistry</td>
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TOTAL UNITS 25

COURSE OFFERINGS

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

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

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

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

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

CHEM 179  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.
Note: May be taken 4 times
Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus.

CHEM 205  Introductory Biochemistry  (3)
3 hours lecture
Prerequisite: A minimum grade of 'C' in CHEM 105
Transfer acceptability: CSU; UC

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

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

To satisfy a prerequisite, the student must have earned a letter grade of A, B, C or CR in the prerequisite course, unless otherwise stated.
See Catalog addendum at http://www.palomar.edu/catalog/2012/ for updates and new program approvals.
CHEM 221  Organic Chemistry (5)
3 hours lecture - 6 hours laboratory
Prerequisite: A minimum grade of 'C' in CHEM 220
Transfer acceptability: CSU; UC
Continued study 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
Note: May be taken 4 times for a maximum of 6 units
Transfer acceptability: CSU; UC – Credit determined by UC upon review of course syllabus.
Independent study for students who have demonstrated skills and/or proficiency 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/acculturation 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.