

Web Designer Emphasis

Certificate of Proficiency

Career/Technical (Major Code: 02339)

Prepares students for self-employment and work in small businesses in any industry that relies on websites for marketing. Builds on their industry education in web design and usability. Expands their education in entrepreneurship and small business management. Contributes to the student's financial independence, career success, and the world's economy. Prepares them for business ownership and key roles in web design or maintenance positions.

CIS 123	Web Publishing With Dreamweaver	6
CIS 162	Web Site Universal Design	2
Plus the Common Core courses for Entrepreneur Education		9
Total units		17

Chemistry

School of Mathematics, Science, and Engineering

Dean Janet Mazarella, M.A., Office 215A, 619-482-6344

Faculty David R. Brown, Ph.D.; David Hecht, Ph.D.; Tinh-Alfredo V. Khuong, Ph.D.; Jacquelyn Thomas, M.S.

Department Chair Tinh-Alfredo V. Khuong, Ph.D.

General Description

Chemistry is a physical science that focuses on the composition, structural properties, reaction of substances, and the means by which matter is converted from one form to another. This discipline explores the fundamentals of organic and inorganic matter, chemical structure and reactivity, qualitative and quantitative analyses, laboratory procedures that include strong emphasis on modern instrumental methods, research methodologies, and quantum mechanics.

Career Options

Below is a sample of the career options available to the chemistry major. A few require an associate in science degree, some require a bachelor's degree, and most require a graduate-level degree: high school or college teacher, analytical chemist, biochemist, polymer chemist, medical doctor, dentist, laboratory technician, and technical sales representative. Entry-level career opportunities are available in biotechnology, biomedical instrumentation, diagnostics, immunochemistry, pharmaceuticals, basic research, and environmental control agencies.

Degree/Certificate Options

Major Code

Associate in Science Degree: Transfer Preparation

Chemistry

01530

Consult with a counselor to develop a Student Education Plan (SEP), which lists the courses necessary to achieve your academic goal.

Note: See also Pharmaceutical and Laboratory Science, page 239.

Web sites for chemistry majors:

SDSU: <http://www.chemistry.sdsu.edu>

UCSD: <http://www.chemistry.ucsd.edu>

CSU, San Marcos: <http://www.csusm.edu/chemistry>

Articulation: <http://www.assist.org>



ASSOCIATE IN SCIENCE DEGREE

Chemistry

Transfer Preparation * (Major Code: 01530)

Chemistry is the study of the composition of matter, its structure, and the means by which it is converted from one form to another. Related to chemistry is molecular biology. Students interested in matter as it applies to life should also take courses in the life sciences. Most courses require mathematics prerequisites. Placement is determined by the Mathematics Assessment Process, which should be taken before registration. It is essential that students start with mathematics during the first semester.

Chemistry majors are advised to give priority to lower-division requirements for the major as they are prerequisites for most upper division courses. Only as many general education courses should be taken as can be included in the 70-unit transfer limitation, and these must be chosen with care to insure that they fit into the general education pattern at the transfer institution.

First Semester **

CHEM 200	General Chemistry I	5
MATH 250	Analytic Geometry and Calculus I	5

Second Semester

CHEM 210	General Chemistry II	5
MATH 251	Analytic Geometry and Calculus II	4
PHYS 270	Principles of Physics I	3
PHYS 271	Principles of Physics Laboratory I	1

Third Semester

CHEM 240	Organic Chemistry I	5
MATH 252	Analytic Geometry and Calculus III	4
PHYS 272	Principles of Physics II	3
PHYS 273	Principles of Physics Laboratory II	1

Fourth Semester

CHEM 250	Analytical Chemistry	5
	OR	
CHEM 242	Organic Chemistry II	

Total units **41**

Students who plan to major in Biochemistry at a four-year college or university should also enroll in BIOL 210 and 212.

** If you do not have the prerequisites for CHEM 200 and MATH 250, take CHEM 170 and MATH 101 in your first semester. This will add one semester to your program of studies.

To earn an associate degree, additional general education and graduation requirements must be completed. See page 49.

* Students planning to transfer to a four-year college or university should complete courses specific to the transfer institution of choice. University requirements vary from institution to institution and are subject to change. Therefore, it is important to verify transfer major preparation and general education requirements through consultation with a counselor in either the Counseling Center or Transfer Center. See catalog TRANSFER COURSES INFORMATION section on page 32 for further information.

Child Development

Higher Education Center at San Ysidro

Dean Silvia Cornejo, M.A., Office 4118B, 619-216-6755

Faculty Sandra Corona, Ph.D.; Leslynn Gallo, Ph.D.; Mary Holmes, M.A.; Virginia Watson, M.A.

Department Chair Leslynn Gallo, Ph.D.

General Description

Child development is the study of the physical, socio-emotional, cognitive, and psychomotor growth and development of the child from conception to adolescence. This department explores human anatomy, health, psychology, sociology, education, nutrition, home and childcare environments, community resources, curriculum, childrearing, and language acquisition as they pertain to the child in contemporary society.

Career Options

Below is a sample of the career options available for the child development major. Most require a certificate or associate degree, some require a bachelor's degree, or a graduate degree: infant-toddler teacher, preschool teacher, director or owner, parent education instructor, elementary school teacher, child and family counselor, pediatric psychologist, college instructor, social worker, adoption counselor, education technician, tutor, social service agent, pediatric nurse or physician, and public health administrator.

Degree/Certificate Options

Associate in Arts Degree: Transfer Preparation

Child Development	01750
-------------------	-------

Associate in Arts Degree: Career/Technical

Child Development Teacher	B2721
---------------------------	-------

Certificates of Achievement

Child Development Teacher Permit	B2722
----------------------------------	-------

Certificates of Proficiency

Family Childcare—Bilingual (English/Spanish)	B2725
Spanish-to-English Associate Teacher Certificate	02723

Consult with a counselor to develop a Student Education Plan (SEP), which lists the courses necessary to achieve your academic goal.