

Chemistry

Warriors on the Way to STEM

WOW2STEM

Las Positas College

Chemistry is known as the central science because the study of matter and energy impacts many disciplines. Throughout the curriculum, chemistry majors develop strong reasoning and analysis skills to address problems that are put into hands-on practice in our laboratories. Students learn to work individually and collaboratively to design, carry out, and interpret experiments utilizing modern instrumentation and facilities.

What can I do with a degree in Chemistry?

The Chemistry B.S. Degree program is nationally approved by the American Chemical Society. The Chemistry B.S. Degree program prepares students for a career as a professional chemist. This degree commonly leads to graduate school for an advanced degree (MS, Ph.D.), professional chemist in industry or government agencies (agriculture, health, biotechnology, air, and water resource management, etc.).

How can I participate in WOW2STEM?

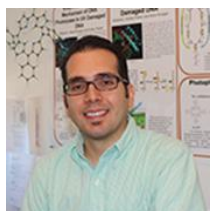
- Meet with a STEM counselor each semester at your community college.
- Follow a student educational plan (SEP) as outlined by a STEM counselor.
- Attend presentations and workshops throughout the year.
- Follow application dates and deadlines as directed by the Transfer Advisor and Stanislaus State.

For more information you may contact:

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209.667.3164

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www.csustan.edu/STEM-success



Dr. Elvin Alemán is a professor in the Chemistry department at Stanislaus State. His current research projects include Single-Molecule Fluorescence studies of how DNA repair enzymes work, and the photophysical characterization of corrole and porphyrin molecules which is important for molecular, electronic and photonic device applications.

Chemistry B.A. Roadmap

Prerequisites to Lower-Division Courses	Lower-Division Courses at Las Positas College	Major Course Requirements at Stanislaus State
MATH 55 or MATH 55B, & CHEM 31	CHEM 1A (Gen. Chemistry I)	Lower-Division Major Course Requirement: CHEM 2010 – Quantitative Analysis & Basic Instrumental Techniques (Complete at Stanislaus State - 4 units) Upper-Division Major Course Requirements: CHEM 4030 – Biophysical Chemistry (3 units) CHEM 4110 – Applied Instrumental Methods (4 units) CHEM 4400 – Biochemistry I (3 units) Upper-Division Electives (Minimum 14 units) Major Total = 24 Upper-Division units
CHEM 1A	CHEM 1B (Gen. Chemistry II)	
MATH 39, 30 or equivalent	MATH 1 (Calculus I)	
MATH 1	MATH 2 (Calculus II)	
Recommended: MATH 107	CS 1 (Computing Fundamentals I)	
CHEM 1B CHEM 12	*CHEM 12A (Organic Chemistry I) *CHEM 12B (Organic Chemistry II)	
MATH 39 PHYS 2A or MATH 1 PHYS 1A & MATH 2 (concurrent) or PHYS 1A & MATH 3 PHYS 1B & PHYS 1C	PHYS 2A (Intro to Physics I) PHYS 2B (Intro to Physics II) or PHYS 1A (Gen. Physics I) PHYS 1B (Gen. Physics II) or PHYS 1C (Gen. Physics III) PHYSC 1D (Gen. Physics IV)	
*CHEM 12A & 12B satisfy the Organic Chemistry series requirement, but do not count as upper-division units. Please note that upon transfer to CSU Stanislaus, eight units of upper-division elective units will be required to complete the major.		

Chemistry B.S. Roadmap		
Prerequisites to Lower-Division Courses	Lower-Division Courses at Las Positas College	Major Course Requirements at Stanislaus State
CHEM-04A & MATH-C	BIOL-04A* (The Cell & Evolution)	Lower-Division Major Course Requirement: CHEM 2010 – Quantitative Analysis & Basic Instrumental Techniques (4 units) Upper-Division Major Course Requirements: CHEM 4010 - Physical Chemistry I (3 units) CHEM 4012 - Physical Chemistry Lab I (1 unit) CHEM 4020 - Physical Chemistry II (3 units) CHEM 4022 - Physical Chemistry Lab II (1 unit) CHEM 4100 - Instrumental Analysis (WP) (4 units) CHEM 4200 - Advanced Inorganic Chemistry (3 units) CHEM 4212 - Advanced Chemistry Lab (2 units) CHEM 4400 - Biochemistry I (3 units) Upper-Division Electives (minimum 11 units*) Major Total = 31 Upper-Division units
BIOL-04A	BIOL-04B (Morphology & Physiology)	
CHEM-02A & MATH-C	CHEM-04A** (General Chem I)	
CHEM-04A	CHEM-04B** (General Chem II)	
CHEM-04B	CHEM-12A*** (Organic Chem I)	
MATH-C MATH-02 <u>or</u> MATH-2H	MATH-10 (Statistics) <u>or</u> MATH-04A (Calculus I)	
MATH-02 or (MATH-25 & MATH-26) MATH-04A PHYS-04A	PHYS-02A (Gen. Physics I) & PHYS-02B (Gen. Physics II) <u>Or</u> PHYS-04A (Basic Physics I) & PHYS-04B (Basic Physics II)	
*While CHEM 12A & 12B, at Las Positas College, satisfy the Organic Chemistry series requirement, they do not count as upper-division units. Upon transfer to CSU Stanislaus, eight units of upper-division elective units will be required to complete the major.		

For all degree requirements, visit www.csustan.edu/roadmaps