

Sample 4 Year Roadmap for Students
in the Bachelor of Science Degree in
CHEMISTRY (Total 120 Units)

	Fall_____	Spring_____	Total Units
Year 1	MATH 2110 (4) ^{a,b,h,*} Calculus I	MATH 2120 (4) ^b Calculus II	30
	CHEM 1100 (5) ^c Gen. Chemistry I	CHEM 1110 (5) [*] Gen. Chemistry II	
	LD GE A2 (3)	LD GE A1 (3)	
	LD Block E (3)	LD GE A3 (3)	
	Total 15 Units	Total 15 Units	
Year 2	MATH 2130 (3) ^b Calculus III	CHEM 3100 (3) ^d Writing for Chem.	32
	PHYS 2100 (5) ^h Gen. Physics I	PHYS 2200 (5) Gen. Physics II	
	CHEM 2200 (4) Organic Chem. I	CHEM 3200 (4) Organic Chem. II	
	CHEM 2201 (1) Organic Lab I	CHEM 2211 (1) Organic Lab II	
	LD GE C1 (3)	MATH 2150 (3) Differential Eq.	
	Total 16 Units	Total 16 Units	
Year 3	CHEM 3500 (4) Quant. Analysis	CHEM 4420 (3) Physical Chem.	28
	CHEM 4410 (4) Physical Chem.	CHEM 4430 (1) Physical Chem.	
	CHEM 3600 (4) Inorg. Chem.	CHEM 4431 (2) Physical Chem. Lab	
	LD GE B2 (3)	CHEM 4300 (3) Intro. Biochem.	
		CHEM 4432 (1) Physical Chem. Lab ⁱ	
		LD GE D (3)	
Total 15 Units	Total 13 Units		
Year 4	CHEM 4810 (2) Adv. Synth. Meth.	CHEM 4890 (3) ^{f,h} Capstone	30
	CHEM 45XX (2) ^e Adv. Analytical	CHEM 45XX (2) ^e Adv. Analytical	
	CHEM UD elective (3) ^g	LD GE AI (3)	
	LD GE AI (3)	UD GE Block D (3)	
	LD GE C2 (3)	LD GE Block F (3)	
	UD GE Block C (3)		
	Total 16 Units	Total 14 Units	
GRAND TOTAL		120	

Revised date: 09/16/22

NOTE: a summary of what courses are prerequisites to others is found in a separate document

- a. The prerequisite to this course is MATH 1040 OR (MATH 1081 + MATH 1083) OR (MATH 1082 + MATH 1083).
- b. For MATH 2110, 2120, 2130, if a student earns less than B-, a 1 unit activity is a required co-requisite.
- c. Prerequisite for this course is math Placement Category I or II.
- d. This course must be taken before CHEM 4431 and CHEM 4890. You must earn a C or better to satisfy the university GEAR writing requirement.
- e. Choose 2 of 3 possible 45XX Advanced analytical courses.
- f. Prerequisites: Completion of Blocks A and B4, an additional course from Block B, and at least one course each from blocks C and D, and CHEM 3100.
- g. A total of 3 units of UD CHEM electives, which may include a maximum of 1 unit of CHEM 4990.
- h. GE "double counting": This roadmap already incorporates double counting, so if you follow this roadmap, you won't be taking unnecessary general education courses. These are the GE requirements and the course you will be taking that counts for it: GEB4 Quantitative Reasoning/MATH 2110; GEB1 Physical Sciences/PHYS 2100. This "double counting" saves you 6 units of LD GE coursework. In addition, CHEM 4890 is required and satisfies your UD GE B requirement, saving you 3 more units of UD GE coursework.
- i. This course must be taken with CHEM 4430.

Additional GE requirements: One GE course must have an "re" designation (race/ethnicity) and another GE course must have either an "re" or "d" (diversity) designation. One GE course must have a "wi" designation. Note that some GE courses may have more than one designation (such as cl and d) and that course CAN be used to satisfy both requirements.

* These courses have been identified as success markers (MATH 1040, CHEM 1110, MATH 2110).

**Effective Fall, 2018: Freshmen applicants will be offered admission to a 'pre-major.' Students who accept the offer of admission and enroll will pursue required lower division coursework, and then may declare the major when they complete the major-specific criteria listed here: <http://www.calstatela.edu/admissions/major-specific-criteria>.

Sample Roadmap for GE certified Transfer Students who have taken General chemistry, calculus, and physics and a year of organic chemistry (lecture and lab) in the Bachelor of Science Degree in
CHEMISTRY (Total 120 Units)^a

	Fall _____	Spring _____	Total Units
Year 1	MATH 2130 (3) ^b Calculus III	MATH 2150 (3) Differential Eq.	
	CHEM 3100 (3) ^d Writing for Chem.	CHEM 4300 (3) Intro. Biochem.	
	CHEM 3600 (4) Inorg. Chem.	CHEM 3500 (4) Quant. Analysis	
	UD GE Block C (3)	UD GE Block D (3)	
	Total 13 Units	Total 13 Units	
Year 2	CHEM 4810 (2) Adv. Synth. Meth.	CHEM 4890 (3) ^{f,h} Capstone	
	CHEM 4410 (4) Physical Chem.	CHEM 4420 (3) Physical Chem.	
	CHEM 45XX (2) ^e Adv. Analytical	CHEM 45XX (2) ^e Adv. Analytical	
	CHEM UD elective (3) ^g	CHEM 4430 (1) Physical Chem.	
		CHEM 4431 (2) Physical Chem.	
		CHEM 4432 (1) Physical Chem. Lab ⁱ	
	Total 11 Units	Total 12 Units	
GRAND TOTAL		49	

Revised date: 09/16/22

NOTE: a summary of what courses are prerequisites to others is found in a separate document.

a. Effective Fall, 2018, transfer students must meet additional admissions criteria, listed here:

<http://www.calstatela.edu/admissions/major-specific-criteria>

b. For MATH 2110, 2120, 2130, if a student earns less than B-, a 1 unit activity is a required co-requisite.

d. This course must be taken before CHEM 4431 and CHEM 4890. You must earn a C or better to satisfy the university GWAR writing requirement

e. Choose 2 of 3 possible 45XX Advanced analytical courses

f. Prerequisites: Completion of Blocks A and B4, an additional course from Block B, and at least one course each from blocks C and D, and CHEM 3100

g. A total of 3 units of UD CHEM electives, which may include a maximum of 1 unit of CHEM 4990

h. GE "double counting": This roadmap already incorporates double counting, so if you follow this roadmap, you won't be taking unnecessary general education courses. CHEM 4890 is required and satisfies your UD GE B requirement, saving you 3 more units of UD GE coursework.

i. This course must be taken with CHEM 4430.

Additional GE requirements: One GE course must have an "re" designation (race/ethnicity) and another GE course must have either an "re" or "d" (diversity) designation. One GE course must have a "wi" designation. Note that some GE courses may have more than one designation (such as cl and d) and that course CAN be used to satisfy both requirements