

## CHEMISTRY MAJOR ADVISEMENT

COURSE	TITLE	CSUDH	CSUF	CSULB	CSULA
BIOL G180	Cell/Dev Biology			BIOL 211 + 212 (3.3)	
BIOL G182	Zoology				
BIOL G183	Botany				
CHEM G180	General Chemistry A	CHE 110 + 112	CHEM 120A	CHEM 111A	
CHEM G185	General Chemistry B		CHEM 120B	CHEM 111B	
CHEM G220	Organic Chemistry A		CHEM 301A + 306A* (2.1)	CHEM 220A + CHEM 220B (3.1)	
CHEM G225	Organic Chemistry B				
MATH G180	Calculus 1	MATH 191	MATH 150A	MATH 122	MATH 2110
MATH G185	Calculus 2	MATH 193	MATH 150B	MATH 123	MATH 2120
MATH G280	Calculus 3	MAT 211 (1.2)	MATH 250A (2.3)	MATH 224 (3.2)	
MATH G285	Intro Linear Alg/Diff Equ		MATH 250B (2.3)		MATH 2150
MATH G235	Ordinary Differential Equ		MATH 250B (2.3)		
MATH G282	Linear Algebra				
PHYS G120	Intro Physics: Mechanics	PHY 120 (1.1)	PHYS 211 + 211L (2.2)		
PHYS G125	Intro Physics: Elect/Mag	PHY 122 (1.1)	PHYS 212 + 212L (2.2)		
PHYS G185	Calc Physics: Mechanics	PHY 130 + 132 + 134* (1.1)	PHYS 225 + 225L (2.2)	PHYS 151	
PHYS G280	Calc Physics: Elect/Mag	PHY 130 + 132 + 134* (1.1)	PHYS 226 + 226L (2.2)	PHYS 152	
PHYS G285	Calc Physics: Modern	PHY 130 + 132 + 134* (1.1)	PHYS 227 + 227L (2.2)		
OTHER				3.4	4.1

**CSU DOMINGUEZ HILLS:** BA Chemistry or Biochemistry, BS Chemistry options available.

1.1: For BA/BS-Chemistry: PHYS G185 + G280 + G285. BA: Biochemistry, complete PHYS G185 + G280 + G285 or PHYS G120 + G125

1.2: Required for BS Chemistry

**CSU FULLERTON:** BA and BS Chemistry, or BS Biochemistry options available

2.1: Students who complete CHEM G220 + G225 will be given subject credit for CHEM 301A+301B+306 at CSUF. No upper division credit granted.

2.2: For BA Chemistry, or BS Biochemistry degree, complete PHYS G120 + G125. For BS Chemistry degree, complete PHYS G185 + G280 + G285

2.3: For BS Chemistry option Complete MATH G280 + either MATH G285 or MATH G282 + MATH G235

**CSU LONG BEACH:** BA Chemistry, BS Chemistry and Biochemistry options available. All majors at this campus are impacted. Please see counselor for admission and selection criteria for this major. Local Admission: 2.5 GPA and completion of CHEM G180 + G185, MATH G180 + G185

3.1: Students must complete entire Organic Chemistry sequence for credit (CHEM G220 + G225). Individual course credit not applicable.

3.2: For BS Chemistry, MATH G280 is required.

3.3: Additional Biology requirement: For Biochemistry option, complete BIOL G180 + G182 + G183. For BS Chemistry: complete either BIOL G180+G182+G183 or BIOL G100, or BIOL G221, or BIOL G225. Biology coursework not required for BA: Chemistry.

3.4: Transfer students must complete CHEM 220A (Organic Chemistry A) and PHYS 151 (Mechanics and Heat) with a grade of "C" or better within one calendar year after transfer to CSULB if equivalent was not taken prior to transfer.

**CSU LOS ANGELES:** BS Chemistry and BS Biochemistry available.

4.1: University requirement of ENGL G110 with a minimum "C" grade.

4.2: Required for BS Chemistry option.

## CHEMISTRY MAJOR ADVISEMENT

		UCB	UCI	UCLA	UCR	UCSD
COURSE	TITLE					
BIOL G180	Cell/Dev Biology				BIOL 5A+5LA + 5B + (6.3)	BILD 1 + 2 + 3 (7.3)
BIOL G182	Zoology					
BIOL G183	Botany					
CHEM G180	General Chemistry A	CHEM 1A + 1AL	CHEM 1A + M2LA + 1B + M2LB + M3C	CHEM 20A + 20B + 20L + 30AL*	CHEM 1A + 1LA + 1B + 1LB + 1C + 1LC	CHEM 6A + 6B + 6C + 7L*
CHEM G185	General Chemistry B	CHEM 1B				
CHEM G220	Organic Chemistry A	CHEM 3A + 3AL	CHEM 51A + M52LA + 51B + M52LB 51C + M52LC	CHEM 30A + 30B + 30BL + 30C + 30CL*	CHEM 112A + 112B + 112C (6.2)	CHEM 140A + 140B + 140C + 143A + 143B
CHEM G225	Organic Chemistry B	CHEM 3B + 3BL				
MATH G180	Calculus 1	MATH 1A	MATH 2A + 2B	MATH 31A	MATH 9A + 9B + 9C (6.1)	MATH 20A
MATH G185	Calculus 2	MATH 1B		MATH 31B		MATH 20B
MATH G280	Calculus 3	MATH 53	MATH 2D	MATH 32A + MATH 32B	MATH 10A + 10B	MATH 20C
MATH G285	Intro Linear Alg/Diff Equ	MATH 54		MATH 33B	MATH 46 (6.4)	MATH 20D (7.1)
MATH G235	Ordinary Differential Equ					MATH 20F (7.2) MATH 18 (7.3)
MATH G282	Linear Algebra				MATH 46 (6.4)	MATH 20D (7.1)
PHYS G185	Calc Physics: Mechanics	PHYS 7A	PHYS 7C + 7LC + 7D + 7LD + 7E	PHYS 1A + 1B + 1C + 4BL	PHYS 40A + 40B + 40C	PHYS 2A+ 2BL*
PHYS G280	Calc Physics: Elect/Mag	PHYS 7B				PHYS 2B + 2CL*
PHYS G285	Calc Physics: Modern	PHYS 7C				PHYS 2C + 2DL*
OTHER		5.1			6.2; 6.5	

**UC BERKELEY:** BA Chemistry in the College of Letters and Science: must complete 1 year of general chemistry, 1 year of organic chemistry, 3 semesters of calculus, 1 semester of physics prior to transfer. For BS Chemistry in College of Chemistry, must complete 1 year general chemistry, 1 year of organic chemistry, 3 semesters of calculus, 1 sem. of physics prior to transfer. AP Credit: Score of 3 or higher on Calculus AB exam or score of 3 or 4 on Calculus BC exam satisfies Calculus I for this major. Score of 5 on the BC Exam satisfies Calculus 1 and 2 for this major. Completion of IGETC recommended.

5.1: Organic Chemistry is an upper division course at UCB. Completion of CHEM G220 + G225 combined with a score in the 75<sup>th</sup> percentile or higher of the American Chemical Society (ACS) Organic Chemistry exam will constitute satisfactory completion of Berkeley's CEHM 112A+112B. Students are encouraged to compete this exam via their community college.

BS Chemistry offered in the College of Chemistry.

5.2: BS degree requires three years of high school foreign language, or CHIN G185 / FREN G185 / SPAN G185. Students that fully complete IGETC will satisfy Reading and Composition, and Foreign Language requirement for College of Chemistry.

**UC IRVINE:** BS Degree. Optional concentrations in Biochemistry and Chemistry Education with optional Secondary Teaching Certification. Students must complete 1 year general chemistry, 1 year calculus and have a minimum 3.0 GPA. Completion of organic chemistry is highly recommended.

**UCLA:** BS Degree. Students must complete at minimum: 1 year general chemistry (CHEM G180+G185), 3 semesters of calculus (MATH G280 level), 1<sup>st</sup> semester of organic chemistry (CHEM G220), and first semester of physics prior to transfer (PHYS G185).

**UC RIVERSIDE:** BA or BS options available, BA or BS in Biochemistry. Minimum 2.70 GPA required. Students must complete at least 1 year of general chemistry (CHEM G180+G185), 1 year of calculus (MATH G180+G185), and one more year-long sequence of lower-division coursework in organic chemistry, physics, or additional mathematics (MATH G280 + G282 or G285) as part of admission selection criteria. IGETC is not accepted for this major.

6.1: AP Calculus score of 3, 4, or 5 on the AB exam (or BC Subscore) will satisfy Math 9A. A score of 3, 4, or 5 on the BC exam will satisfy Math 9A + 9B.

6.2: Students who complete CHEM G220 + G225 with minimum "B" grades will be given subject credit for CHEM 112ABC at UCR. No upper division credit granted.

6.3: Required for BS Chemistry - Environmental Chemistry option.

6.4: For BS Chemistry: Complete either MATH G285 or MATH G282. For BA Chemistry, omit this requirement.

**UC SAN DIEGO:** Degrees in Chemistry and Biochemistry: Biochemistry/Chemistry, Chemistry, Chemical Education, Chemical Physics, Environmental Chemistry, Molecular Synthesis, and Pharmacological Chemistry.

7.1: Combination of MATH G185 + MATH G282 or MATH 285 is equivalent to MATH 20D

7.2: MATH G235 Required for Chemical Physics.

7.3: Required for Pharmacological Chemistry majors. Chemical Education students: complete BILD 1 at UCSD after transfer.