

BACHELOR OF SCIENCE IN CHEMISTRY OPTION IN MATERIALS SCIENCE FOUR YEAR DEGREE WORKSHEET 2017-2018 Catalog

This degree worksheet is intended to help you develop a balanced course schedule while completing your degree within 4 years. The same sequence of courses (with fewer courses each semester) is also recommended for students completing their degree in 5 or 6 years. This worksheet is not intended to replace academic advising with your assigned advisor. Students should consult with their assigned advisor to determine the appropriate sequence of required courses and electives based on their academic goals.

CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.

Year 1

Semester	Course #	Course Title (Units)	Prerequisites	Notes
1	CHEM 111A	General Chemistry (5)	passing score on the CPT; <i>Corequisite:</i> MATH 109 or higher	
	MATH 122	Calculus I (4)	MATH 111 and MATH 113	
	GE (area A1)	Written Communication (3)		
	GE (area C,D,E)	Other Exploration (3)		
	NSCI-190A	Experience Success Program 1 (1)		Fall only
2	CHEM 111B	General Chemistry (5)	CHEM 111A and MATH 122	
	MATH 123	Calculus II (4)	MATH 122	
	GE (area A2)	Oral Communication (3)		
	GE (area A3)	Critical Thinking (3)		

Year 2

Semester	Course #	Course Title (Units)	Prerequisites	Notes
3	CHEM 220A	Organic Chemistry I (3)	CHEM 111B. <i>Corequisite</i> : CHEM 223A.	
	PHYS 151	Mechanics and Heat (4)	MATH 122	
	MATH 224	Calculus III (4)	MATH 123	
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective Requirement (1)		
4	CHEM 220B	Organic Chemistry II (3)	CHEM 220A. <i>Corequisite</i> : CHEM 223B or 320L	
	CHEM 320L	Organic Chemistry Laboratory (2)	CHEM 220A. <i>Corequisite</i> : CHEM 220B	
	PHYS 152	Electricity and Magnetism (4)	PHYS 151	
	CHEM 361	Chemical Communications (3)	GE Written Communication (A1), GE Critical Thinking (A3), and GE Oral Communication (A2), and MATH 122 (B2)	
	GE (area C,D,E)	Other Exploration (3)		

Year 3

Semester	Course #	Course Title (Units)	Prerequisites	Notes
5	CHEM 331	Inorganic Chemistry (3)	CHEM 111B. <i>Corequisite</i> : CHEM 332	Fall
	CHEM 332	Inorganic Chemistry Laboratory (2)	CHEM 111B. <i>Corequisite</i> : CHEM 331	
	CHEM 385	Material Science (3)	CHEM 111A and 111B and PHYS 152	Fall
	BIOL 200; OR BIOL 205; OR BIOL 207; OR BIOL 211	General Biology (4); OR Human Biology (4); OR Human Physiology (4); OR Intro. to Evolution and Diversity (4)	GE Written Communication (A1), GE Critical Thinking (A3), and MATH 122; OR (211): CHEM 11A	211 needs 212 after
	GE (area C,D,E)	Other Exploration (3)		

Semester	Course #	Course Title (Units)	Prerequisites	Notes
6	CHEM 371B	Physical Chemistry (3)	CHEM 111B and MATH 123 and PHYS 152	Spring only
	CHEM 385C	Materials Science Colloquium (1)	CHEM 111A and 111B and PHYS 152	Spring only
	CHEM 385L	Materials Science Laboratory (2)	CHEM 111A and 111B and PHYS 152	Spring only
	CHEM 431	Advanced Inorganic Chemistry (3)	CHEM 331; <i>Corequisite</i> : CHEM 371B	Spring only
	GE (area C,D,E)	Other Exploration (3)		
	GE Capstone (area F)	General Education & Foundation (3)	GE Written Communication (A1), GE Critical Thinking (A3), and GE Oral Communication (A2), MATH 122 (B2)	

Year 4

Semester	Course #	Course Title (Units)	Prerequisites	Notes
7	CHEM 371A	Physical Chemistry (3)	CHEM 111B and MATH 123 and PHYS 152	Fall only
	CHEM 373	Phys. and Inorganic Chem. Lab. (3)	CHEM 111B and either 371A or 371B	
	CHEM 485	Special Topics in Materials Science (3)	CHEM 220B, 331, and 385	Fall only
	GE (area C,D,E)	Other Exploration (3)	GE (area C, D, and E)	
	GE Capstone (area F)	General Education & Foundation (3)	GE Written Comm. (A1), GE Critical Thinking (A3), and GE Oral Comm. (A2), and MATH 122 (B2)	
8	CHEM 451	Instrumental Methods of Analysis (3)	CHEM 152, 361 and 371B	
	CHEM 461	Chemistry Capstone (1)	Take in final semester	
	CHEM 496	Undergraduate Directed Research (1)		
	CHEM 441A; OR CHEM 448	Biological Chemistry (3); OR Fund. of Biological Chemistry (3)	CHEM 220B and 320L; OR CHEM 220B	
	GE (area C,D,E)	Other Exploration (3)		
	Elective	Elective (1)	Elective	
	BIOL 212 (if 211 taken)	Introduction to Cell and Molecular Biology (4)	BIOL 211	