

# BACHELOR OF SCIENCE IN CHEMISTRY (IMPACTED)

## Option in Materials Science Major Requirements Worksheet 2016-2017 Catalog

Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

*NOTE: This checklist is not intended to replace advising from the major department. Students should consult with the major advisor to determine the appropriate sequence of courses. This checklist is to inform students of major requirements and course prerequisites only. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification. **Pre-Chemistry majors must complete their GE Foundation courses, and the highlighted areas below all with a "C" or better and a cumulative GPA of 2.5, by 60 units to be considered for the major.***

See Dr. Kasha Slowinska about this option.

### Degree Progress

Freshman need to complete Math 122 and CHEM 111A within one calendar year. CHEM 111B and CHEM 220A within two calendar years, all with a grade of "C" or better. Transfer students need to complete CHEM 220A and PHYS 151 within one calendar year, all with a grade of "C" or better.

Semester	Grade	Course #	Course Title	Prerequisites
		MATH 122	Calculus I (4)	MDPT placement or MATH 111 and 113
		MATH 123	Calculus II (4)	MATH 122
		MATH 224	Calculus III (4)	MATH 123 or 222
		PHYS 151	Mechanics and Heat (4)	Pre/corequisite: MATH 122
		PHYS 152	Electricity and Magnetism (4)	PHYS 151; Pre/corequisite: MATH 123
		CHEM 220A	Organic Chemistry I (3)	CHEM 111B
		CHEM 220B	Organic Chemistry II (3)	CHEM 220A. Corequisite: CHEM 320L

### Choose ONE of the following groups:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 111A	General Chemistry (5) <b>AND</b>	A passing score on the CPT; Corequisite: MATH 109 or higher
		CHEM 111B	General Chemistry (5)	CHEM 111A and MATH 113 or 115 or 119A or 122

OR

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 112A	Advanced General Chemistry (5) <b>AND</b>	Department Consent
		CHEM 112B	Advanced General Chemistry (5)	CHEM 112A

### Choose either ALL of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 211	Intro. to Evolution and Diversity (4) <b>AND</b>	Pre/Corequisite: CHEM 111A
		BIOL 212	Intro. to Cell and Molecular Biology (4)	BIOL 211, CHEM 111A. Pre/Corequisite: CHEM 111B

### OR ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		BIOL 200	General Biology (4)	GE Foundation
		BIOL 205	Human Biology (4)	GE Foundation
		BIOL 207	Human Physiology (4)	GE Foundation

## UPPER DIVISION COURSES (See major faculty advisor)

### Take ALL of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 320L	Organic Chemistry Laboratory (2)	CHEM 220A; <i>Corequisite</i> : CHEM 220B
		CHEM 331	Inorganic Chemistry (3)	CHEM 111B
		CHEM 332	Inorganic Chemistry Laboratory (2)	<i>Pre/corequisite</i> : CHEM 331
		CHEM 361	Chemical Communications (3)	GE Foundation requirement. 11 or higher on GWAR. <i>Pre/Corequisite</i> : CHEM 220A
		CHEM 371A	Physical Chemistry: Thermodynamics and Kinetics (3)	CHEM 111B, MATH 123, PHYS 152. <i>Pre/corequisite</i> : MATH 224
		CHEM 371B	Physical Chemistry: Quantum Mechanics and Spectroscopy (3)	CHEM 111B, MATH 123, PHYS 152. <i>Pre/corequisite</i> : MATH 224
		CHEM 373	Physical and Inorganic Chemistry Laboratory (3)	CHEM 111B; CHEM 371A or 377A or 377B. <i>Corequisite</i> : CHEM 371B
		CHEM 385	Materials Science (3)	CHEM 111A, PHYS 152; CHEM 111B or PHYS 320
		CHEM 385L	Materials Science Laboratory (2)	CHEM 111A, PHYS 152; CHEM 111B or PHYS 320
		CHEM 385C	Materials Science Colloquium (1)	CHEM 111A, PHYS 152; CHEM 111B or PHYS 320
		CHEM 431	Advanced Inorganic Chemistry (3)	CHEM 331 and 371B
		CHEM 451	Instrumental Methods of Analysis (5)	PHYS 152, CHEM 361; 371B <i>or</i> 377B
		CHEM 461	Chemistry Capstone (1)	Department Consent
		CHEM 485	Special Topics in Materials Chemistry (3)	CHEM 220B, CHEM 331; CHEM 385 or consent of instructor
		CHEM 496	Directed Undergraduate Research (1)	Consent of instructor

### Choose ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 441A	Biological Chemistry (3) <b>OR</b>	Either CHEM 320L or <i>both</i> CHEM 220B and 223B. Recommended: a BIOL or MICR course.
		CHEM 448	Fundamentals of Biological Chemistry (3)	CHEM 220B

NOTE: See the catalog for courses that do not meet any specific or elective requirements for the major