

## MINOR IN CHEMISTRY

### Minor Requirements Worksheet

### 2018-2019 Catalog

*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; the [CSULB Course Catalog](#) takes precedence in any conflict. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.*

Before adding any minors, students must check to see if this addition will affect CSULB's [Timely Graduation for Undergraduate Students](#) policy. Under this policy, students may earn up to 120% of the number of units required for the degree in their **declared primary major**. In addition, the policy requires that a student must file a Request to Graduate form with Enrollment Services by the time the student has completed 100% of the units required for the declared primary major. Any additional degree objectives (e.g., majors, minors, certificates, etc.) must be completed within the 120% unit limit.

The minor in Chemistry is available to any non-Chemistry or non-Biochemistry major. A minimum of 19 Chemistry units must include a minimum of 6 units of upper division Chemistry courses.

All prerequisites require a "C" or better. See catalog for more detail.

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 111A	General Chemistry (5)	A passing score on CPT or other measures. <i>Corequisite:</i> MATH 112A or higher
		CHEM 111B	General Chemistry (5)	CHEM 111A, and MATH 112B or 113 or 115 or 119A or 122

## ORGANIC CHEMISTRY PATHS

If you choose to take Organic Chemistry you may take classes from only one of the paths to meet the requirements of the minor:

### O-Chem Path 1: CHEM 227

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 227	Fundamentals of Organic Chemistry (3)	CHEM 111A; <i>Recommend:</i> CHEM 111B

### O-Chem Path 2: CHEM 220A and 220B

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 220A	Organic Chemistry I (3)	CHEM 111B. <i>Corequisite:</i> CHEM 223A
		CHEM 220B	Organic Chemistry II (3)	CHEM 220A. <i>Corequisite:</i> CHEM 223B or 320L

## PHYSICAL CHEMISTRY PATHS

If you choose to take Physical Chemistry you may take classes from only one of the paths to meet the requirements of the minor:

### P-Chem Path 1: CHEM 371A and 371B

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 371A	Thermodynamics and Kinetics (3)	CHEM 111B and MATH 123 and PHYS 152. <i>Pre/Corequisite:</i> MATH 224
		CHEM 371B	Quantum Mechanics and Spectroscopy (3)	CHEM 111B and MATH 123 and PHYS 152. <i>Pre/Corequisite:</i> MATH 224

**P-Chem Path 2: CHEM 375**

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 375	Physical Chemistry for Engineers (3)	MATH 123 and PHYS 151 and CHE 310; PHYS 152 or EE 210/EE 210L; CHEM 111A/B; CHEM 220A or 227

**P-Chem Path 3: CHEM 377A and 377B**

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 377A	Fundamentals of Physical Chemistry (3)	CHEM 111B and MATH 123, and PHYS 152
		CHEM 377B	Fundamentals of Physical Chemistry (3)	CHEM 111B and MATH 123, and PHYS 152

**BIOCHEMISTRY PATHS**

If you choose to take Biochemistry you may take classes from only one of the paths to meet the requirements of the minor:

**Biochem Path 1: CHEM 441A and CHEM 441B**

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 441A	Biological Chemistry (3)	CHEM 220B; CHEM 320L or 223B
		CHEM 441B	Biological Chemistry (3)	CHEM 441A

**Biochem Path 2: CHEM 448**

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 448	Fundamentals of Biological Chemistry (3)	CHEM 220B or 227

The following courses are NOT acceptable towards the minor: CHEM 90, 100, 140, 224A, 224B, 302, and 361.

In addition to the courses listed above the following courses may be used to complete the minor in chemistry. A Maximum of 3 units of CHEM 496 may be used to complete the Minor in Chemistry: CHEM 223A, 223B, 251, 296, 320L, 331, 332, 373, 420, 421, 431, 443, 449, 451, 480, and 496.

Semester	Grade	Course #	Course Title	Prerequisites