

BACHELOR OF ARTS IN CHEMISTRY

Major 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.

Degree Progress

Freshman need to complete MATH 122 and CHEM 111A within one calendar year, and 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.

Many prerequisites require a "C" or better; please check the course catalog for grade requirements.

Take ALL of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 220A	Organic Chemistry I (3)	CHEM 111B
		CHEM 220B	Organic Chemistry II (3)	CHEM 220A. <i>Corequisite:</i> CHEM 320L
		MATH 122	Calculus I (4)	Appropriate algebra/calculus placement; or MATH 111 and either MATH 112B or 113
		MATH 123	Calculus II (4)	MATH 122
		PHYS 151	Mechanics and Heat (4)	<i>Pre/Corequisite:</i> MATH 122 or 123 or 224
		PHYS 152	Electricity and Magnetism (4)	PHYS 151. <i>Pre/Corequisite:</i> MATH 123

Take ONE of the following groups:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 111A + CHEM 111B	General Chemistry (5); General Chemistry (5)	Passing score on CPT or other measures. <i>Pre/Corequisite:</i> MATH 112A or higher; CHEM 111A, and MATH 112B or higher
		CHEM 112A + CHEM 112B	Adv. General Chemistry (5); Adv. General Chemistry (5)	Department consent; CHEM 112A

Take CHEM 251 or 4 units of elective chosen in consultation with an advisor:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 251	Quantitative Analysis (4)	CHEM 111B

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 361	Chemical Communications (3)	GE Foundation requirement. 11 or higher on GWAR. <i>Pre/Corequisite:</i> CHEM 220A
		CHEM 451	Instrumental Methods of Analysis (5)	PHYS 152; CHEM 361 or NSCI 361; CHEM 371B or 377B
		CHEM 461	Chemistry Capstone (1)	Department consent

Take ONE of the following courses:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 420	Advanced Organic Chemistry Laboratory (3)	CHEM 220B and 320L; CHEM 361 or NSCI 361
		CHEM 498	Senior Thesis	Major GPA 3.0 or higher, 3 units of CHEM 496 with a grade of "A", instructor consent

Take ONE of the following groups:

Semester	Grade	Course #	Course Title	Prerequisites
		CHEM 371A + CHEM 371B	Thermodynamics and Kinetics (3); Quantum Mechanics and Spectroscopy (3)	CHEM 111B and MATH 123 and PHYS 152. <i>Pre/Corequisite:</i> MATH 224; CHEM 111B and MATH 123 and PHYS 152. <i>Pre/Corequisite:</i> MATH 224
		CHEM 377A + CHEM 377B	Fundamentals of Physical Chemistry (3); Fundamentals of Physical Chemistry (3)	CHEM 111B and MATH 123 and PHYS 152; CHEM 111B and MATH 123 and PHYS 152

Take an additional THREE units:

Choose with advisor consultation from the following: CHEM 332, 373, 385, 385C, 385L, 421, 431, 441A, 441B, 448, 480, 496, RSCH 296A, 496A

Semester	Grade	Course #	Course Title	Prerequisites

Note: Only one biochemistry pathway may be used toward this degree program: either CHEM 448 or CHEM 441A and/or CHEM 441B.