

CHEMISTRY DEGREE REQUIREMENTS

BASIC REQUIREMENTS

- Math 2A Math 2B Math 2D
- Physics 7C-7D-7E-7LC-7LD
- Chem M2A/H2A-M2B/H2B-M2C/H2C
- Chem M2LA/H2LA-M2LB/H2LB Chem M3LC
- Chem 5
- Chem 51A/H52A-51B/H52B-51C/H52C
- Chem M/H52LA-M/H52LB-M/H52LC
- Chem 107 Chem 107L
- Chem 132A-132B-132C
- Chem 152

Electives (5 Courses; at least 3 of the courses must be offered by the Chemistry department, including at least 1 Chemistry lecture course and 1 Chemistry lab course.)

At least **two** lecture courses chosen from the Lecture list:

Bio Sci	98, 99, M114, M116, M123
Chemistry	100, 125, 127, 128, 133, 138, 141, 145A, 145B 150, 177, 201-205, 210-269
ESS	142, 144, 171
Engineering	CBE 110, 130, 145, 161, 181, 183 CEE 162, MAE 114, MAE 164, MSE 141, MSE 164
Pharm Sci	170A, 170B, 171
Physics	111A, 111B, 112A, 112B
Pub Health	171

At least **two** laboratory courses chosen from the Lab list:

Bio Sci	M114L, M116L, M118L
Chemistry	128L, 133L, 150L, 153, 156, 160, 177L, 180, 197, (180/H180 may be counted only once)
ESS	114
Engineering	CBE 140A, 140B

- _____ (chem lecture)
- _____ (chem lab)
- _____ (any chem elective)
- _____ (any elective)
- _____ (any elective)

Concentration courses may be used to fulfill the lecture and lab electives, where overlap exists.

Optional Concentration in Chemical Biology

- Bio Sci 97 Bio Sci 98 Bio Sci 99
- Chem 128 Chem 128L

Optional Specialization in Medicinal Chemistry

- Chem 128 Chem 128L Chem 160
- Chem 177 Chem 177L

Optional Specialization in Nuclear and Radiochemistry

- Chem 133 Chem 133L Chem 153 Approved Elective

Optional Specialization in Synthetic Chemistry

- Chem 125 Chem 127 Chem 156 Chem 160

Optional Specialization in Environmental Chemistry

- ESS 144 Chem 141 Chem 153
- Chem 145A **OR** ESS 142

Optional Concentration in Chemistry Education

- Educ 55 Phy Sci 5 Phy Sci 105 Chem 193

Secondary Teaching Certification Option:

In addition to the Concentration requirements, students can earn a California Single Subject Teaching Credential by completing **all of these additional classes**:

- LPS 60
- Educ 109 Educ 143AW Educ 143BW Educ 148
- Educ 158 Educ 158 (two quarters required)
- ** Education 143A and 143B plus 148 count as three electives from the elective list. **

Optional Concentration in Theoretical and Computational Chemistry and Quantum Science

- Math 3A Math 3D
- Chem 150 Chem 150L
- Physics 50

Select at least nine courses from the courses below, at least one must be taken from each list, or the chemistry major electives list.

- One from List #1:
Physics 111A, 111B, 112A, 112B, 113A, 113B, 113C, 115A, 125A, 125B
- One from List #2:
Math 105A-LA, 105B-LB
Stats 7, 110, 111, 112
- One from List #3:
EECS 12, 20, 22, 22L

** Chem 5, 107L, 152, and all electives under the regular Chemistry Major are not required and are optional for this concentration. **

Optional American Chemical Society Certification

- Chem 128 Chem 128L
- Select 3 courses; at least one from each list:
- List #1: Chem 153, 156, 160, 180, H180
- List #2: Chem 125, 127, 133 & 133L, 138, 141, 150 & 150L, 177 & 177L, 201-205, 213-249
- Additional course from List #1 or #2
(If Chem 133 or 150 or 177, then the lecture & lab must both be taken to satisfy one of the elective requirements)
- Chem 180W or H181W