

CHEMISTRY DEGREE REQUIREMENTS

BASIC REQUIREMENTS

- Math 2A Math 2B Math 2D
- Physics 7C-7D-7E-7LC-7LD
- Chem M2A/H2A-M2B/H2B-M3C/H2C
- Chem M2LA/H2LA-M2LB/H2LB Chem M3LC/H2LC
- 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 |
| Chemistry | 125, 127, 128, 133, 137, 138, 141, 145A, 145B, 150, 177, any from 201-205, 213-229A, 230-242A, 243, 250, 271 |
| ESS | 122, 142, 144 |
| Engineering | CBEMS 110, 112, 130, 135, 143, 154 |
| Physics | 111A, 111B, 112A, 112B |

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

| | |
|-------------|--|
| Bio Sci | M114L, M116L, M118L |
| Chemistry | 128L, 133L, 153, 150L, 156, 160, 170, 177L, 180, 197, 250L (180/H180 may be counted only once) |
| Engineering | CBEMS 140A, 140B |
| Physics | 120, 121W |

- _____ (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 CBEMS 143

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 143A Educ 143B 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

- Math 3A Math 3D
- Chem 150 Chem 150L
- Physics 50 **OR** Physics 100

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