CHEMISTRY (CH25)

Major Requirements for the CHEMISTRY B.S. Degree
Starting Fall 2017 and After

The Chemistry major provides a broad introduction for the biochemistry, organic, physical, or inorganic student as well as those who prefer not to specialize. This major will enable a student to pursue further studies in chemistry or in related fields of science, medicine, or engineering.

The following courses must be taken for a letter grade, unless that is not permitted:

**Lower-Division Requirements**
1. General Chemistry: 6A, 6B & 6C or 6AH, 6BH & 6CH
2. General Chemistry Laboratory: 7L or CHEM 7LM
3. Physics: 2A, 2B & 2C or 2D
4. Physics Laboratory: 2BL or 2CL or 2DL
5. Calculus: 20A, 20B, 20C & 20D, or equivalent
6. Organic Chemistry: 40A, 40B & 40C or 40AH, 40BH & 40CH
7. Organic Chemistry Laboratory: 43A or 43AM

**Upper-Division Requirements**
1. Physical Chemistry (CHEM 130-132)
2. Inorganic Chemistry (CHEM 120A & B)
3. Biochemical Structure and Function (CHEM 114A)
4. Required Laboratory Courses (must take all 3):
   a. Analytical Chemistry Laboratory (CHEM 100A)
   b. Organic Chemistry Laboratory II (CHEM 143B)
   c. Physical Chemistry Laboratory (CHEM 105A)
5. Laboratory Elective (Select 2 of the following courses):
   o Instrumental Chemistry Laboratory (CHEM 100B)
   o Advanced Physical Chemistry Laboratory (CHEM 105B)
   o Protein Biochemistry Laboratory (CHEM 108)
   o Recombinant DNA Laboratory (CHEM 109)
   o Advanced Inorganic Chemistry Laboratory (CHEM 123)
   o Organic Chemistry Laboratory III (CHEM 143C)
   o Molecular Design and Synthesis (CHEM 143D)
   o Reading and Research (CHEM 199): 8 units with of research with the same instructor may be petitioned to fulfill one elective lab.
6. Additional Electives (Select 3 electives that match the following description): These electives are defined as a four-unit (minimum) upper division courses offered by the Department of Chemistry and Biochemistry and taken for a letter grade. Four units of a non-letter graded courses such as CHEM 195 and CHEM 199, may be petitioned to fulfill one elective.

Majors sheets for students who entered prior to Fall 2017 can be found on our website:
http://chem-web.ucsd.edu/undergraduate/majors-minor/
### Suggested Program for Chemistry B.S. Major

(Talk to your college for planning general education courses)

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### Notes:
1. Many courses have enforced prerequisites or are offered once per year. It is your responsibility to know which prerequisites are needed for each course. [https://www.ucsd.edu/catalog/courses/CHEM.html](https://www.ucsd.edu/catalog/courses/CHEM.html)
2. Elective labs chosen from CHEM 100B, 105B, 108, 109, 123, 143C, 143D. Units may vary by lab chosen.
3. Electives chosen from among all of the upper-division and graduate courses offered by the Department of Chemistry & Biochemistry (except non-letter graded courses). 4-Units of CHEM 199 may be petitioned to fulfill 1 Elective OR 8-units of CHEM 199 may be petitioned for an Elective Lab.
4. Best time to study abroad is Fall quarter of Sophomore or Junior Year. Education Abroad Program deadlines for upcoming year vary by country. See EAP website. See the Chemistry & Biochemistry Undergraduate Advisor for assistance in planning to study abroad.

For detailed information, please see our website: [https://chemistry.ucsd.edu/undergraduate/majors-minor/index.html](https://chemistry.ucsd.edu/undergraduate/majors-minor/index.html)