

## ENVIRONMENTAL CHEMISTRY

### Requirements for the ENVIRONMENTAL CHEMISTRY B.A. and B.S. Degree

Students have the option of earning the B.A. or the B.S. in the Environmental Chemistry major. The B.S. is ACS certified and is recommended for those who intend to apply to graduate school.

The Environmental Chemistry major requires a strong chemistry background, but also includes breadth courses from other disciplines related to environmental concerns. The elective courses allow specialization in a secondary area of interest, such as economics, political science, biology, earth sciences, or additional chemistry.

The program is designed to prepare students to enter the industrial, governmental, or legal workforce, or to continue studies in the environmental sciences. Students fulfilling their elective requirements with chemistry and biochemistry courses would be prepared to attend most graduate schools in a chemical sciences.

**The following courses must be taken for a letter grade:**

#### ***Lower-Division Requirements***

1. General chemistry including laboratory (Chem. 6A-6C or 6AH-6CH and 6BL, or equivalent).
2. Calculus (Math. 20A-20D, or equivalent).
3. Calculus-based physics (Phys. 2A-2B and 2D or equivalent). Phys. 2CL (or Phys. 2BL or 2DL) is required for a B.S. degree.

#### ***Upper-Division Requirements***

1. Two quarters of organic chemistry (Chem. 140A-B or 141A-B).
2. Two quarters of physical chemistry (Chem. 126-127 recommended; 131-133 acceptable).
3. One quarter of inorganic chemistry (Chem. 120A) or a third quarter of organic chemistry (Chem. 140C or 141C).
4. One quarter of biochemistry (Chem. 114A).
5. Three laboratory courses (Chem. 100A, 100B, and 143AM or 143A).
6. Two quarters of environmental chemistry (Chem. 149A-B).
7. Atmospheric chemistry (Chem. 173).

#### ***Elective Requirements***

1. Four non-science elective courses chosen from the following list (at least one course must be upper-division): Econ. 1, Econ. 3, Econ. 131, Econ. 132, HIUS 154, Phil. 148, Phil. 164, Poli. SCI 160AA, Poli. SCI 160AB, Poli. SCI 162, Soc. 185, USP 2, USP 124, USP 144, USP 171. Environmental chemistry students must complete their elective requirements through coursework and cannot substitute examination scores such as Advanced Placement examinations for these courses.
2. Three science elective courses chosen from the following list (at least two courses must be upper-division): Chem. 105A, Chem. 105B, Chem. 112A, Chem. 112B, Chem. 114B, Chem. 114C, Chem. 120A, Chem. 120B, Chem. 123, Chem. 140C or 141C, Chem. 143B, Chem. 143C, Chem 143D, Chem. 170, Chem. 171, Chem. 199, Erth. 40, Erth. 101, Erth. 102, Erth. 103, BILD 1, BILD 2, BILD 3, BIEB 120, BIEB 121, BIEB 176, BIEB 178, BIEB 179, MAE 118A, MAE 118B.
3. Students desiring an ACS certified B.S. Degree must take three laboratory courses: Chem. 105A, 143B or 143C, and one from the following list: Chem. 105B, 112A, 112B, 123, 143B, 143C, or 143D. These courses may be used to satisfy number 2 above.

**Suggested Program for Environmental Chemistry B.A. or B.S. Major (B.S. and ACS certification require additional courses)**

(Talk to your college for planning general education courses)

Many courses have enforced prerequisites or are offered once per year.

FALL	WINTER	SPRING
<b>FRESHMAN YEAR</b>		
Chem. 6A Math. 20A	Chem. 6B Math. 20B Phys. 2A	Chem. 6C Chem. 6BL Math. 20C
<b>SOPHOMORE YEAR</b>		
Chem. 100A * Chem. 140A Math. 20D	Chem. 140B Chem. 143AM Phys. 2B	Chem. 100B Phys. 2D
<b>JUNIOR YEAR</b>		
Chem. 126 * Chem. 149A Elective	Chem. 127 Chem. 149B Elective	Chem. 173 Elective Elective
<b>SENIOR YEAR</b>		
Chem. 114A Chem. 120A**	Elective	Elective Elective

\* Best time to study abroad. Education Abroad Program deadlines for upcoming year vary by country. See EAP website. See the Chem/Biochem Undergraduate Advisor for assistance in planning to study abroad.

\*\* Chem. 140C may be substituted.

**RESOURCES**

To be successful in your academic career, you will need to make the most of the services available to you at UCSD. Get connected to the services available to you as soon as possible to make the most of your education!

**American Chemical Society-Student Affiliates**

Email: [acssa@ucsd.edu](mailto:acssa@ucsd.edu)  
[www-acis.ucsd.edu/~acssa](http://www-acis.ucsd.edu/~acssa)

**UCSD Web Site:** [www.ucsd.edu](http://www.ucsd.edu)

**UCSD General Catalog**

[www.ucsd.edu/catalog](http://www.ucsd.edu/catalog)  
purchase at UCSD Bookstore, 858-534-7323

**UCSD Career Services Center**

858-534-3750, [www-csc.ucsd.edu](http://www-csc.ucsd.edu)

**UCSD Undergraduate Admissions**

858-534-4831, [admissions.ucsd.edu](http://admissions.ucsd.edu)

**Campus Walking Tours**

858-822-1455, [campustours@ucsd.edu](mailto:campustours@ucsd.edu)

**Education Abroad Program**

858-534-1123,  
<http://pao.ucsd.edu/acadint/chemistry.htm>

**Undergraduate Colleges**

The colleges determine the general education requirements that you must complete in addition to your major requirements. Be sure to meet with a college adviser.

**Thurgood Marshall**, 858-534-4110,

[www.provost.ucsd.edu/marshall](http://www.provost.ucsd.edu/marshall)

**John Muir**, 858-534-3580,

[www.provost.ucsd.edu/muir](http://www.provost.ucsd.edu/muir)

**Revelle**, 858-534-3490,

[www.provost.ucsd.edu/revelle](http://www.provost.ucsd.edu/revelle)

**Eleanor Roosevelt**, 858-534-9864,

[www.provost.ucsd.edu/roosevelt](http://www.provost.ucsd.edu/roosevelt)

**Earl Warren**, 858-534-4350,

[www.provost.ucsd.edu/warren](http://www.provost.ucsd.edu/warren)

**Sixth College**, 858-822-5955,

[www-sixth.ucsd.edu](http://www-sixth.ucsd.edu)