Required Coursework

Chemistry Plan A (Research-based Thesis)
Complete 21 units in required courses, including CHEM 420, 470, 631, 641, 651, 680, 681, and 691. Complete additional, approved courses as elective units to a total of 30 units. Submit an approved University Thesis.

Chemistry Plan B (Review Paper/Comprehensive Exam)
Complete 23 units in required courses, including CHEM 420, 425, 470, 631, 641, 642, 651, 680, 681, 692, and 693. Complete additional, approved courses as elective units to a total of 30 units. Pass written Comprehensive Exams, and write and orally defend a Literature Review paper on an approved topic.

Biochemistry concentration Plan A (Research-based Thesis)
Complete 24 units in required courses, including CHEM 420, 470, 631, 641, 642, 651, 680, 681, and 691. Complete additional, approved courses as elective units to a total of 30 units. Submit an approved University Thesis.

Biochemistry Concentration Plan B (Review Paper/Comprehensive Exam)
Complete 22 units in required courses, including CHEM 420, 470, 631, 641, 642, 651, 680, 681, 691, and 693. Complete additional, approved courses as elective units to a total of 30 units. Pass written Comprehensive Exams, and write and orally defend a Literature Review paper on an approved topic.

For Further Information
http://www.csueastbay.edu/chemistry/
Or contact the Chemistry Department Graduate Coordinator: Dr. Anne Kotchevar (anne.kotchevar@csueastbay.edu)

Chemistry and Biochemistry Department Office
Science North, Room 431
California State University, East Bay
25800 Carlos Bee Blvd.
Hayward, CA 94542-3089
Phone: (510) 885-3452
Fax: (510) 885-4675

To Apply
http://www.csueastbay.edu/admissions/

The Master of Science Degree in Chemistry at CSU East Bay

Chemistry and Biochemistry Department Office:
Science North, Room 431

You will benefit from earning an M.S. degree in Chemistry if:

1. You are seeking a job in industry beyond the B.S. degree level, or
2. You are now employed at the B.S. degree level, but want to advance your career, or
3. You want to teach high school or community college level Chemistry or Biochemistry, or
4. You want to pursue a Ph.D. degree in Chemistry or Biochemistry in the future, or
5. You want to strengthen your application to Medical, Dental, or Pharmacy School.
**Faculty**

The Professors in the Chemistry and Biochemistry Department all hold Ph.D. degrees from highly respected Universities. They bring diverse specialties to the Program, and provide students with the knowledge and skills they will need to succeed.

Dr. Mark Borja (Ph.D., UC-Berkeley)
Dr. Patrick Fleming (Ph.D., The Ohio State University)
Dr. Michael Groziak (Ph.D., Northwestern University)
Dr. Martin Halim (Ph.D., Columbia University)
Dr. Patrick Huang (Ph.D., UC-Berkeley)
Dr. Anne Kotchevar (Ph.D., University of Minnesota)
Dr. Ann McPartland (Ph.D., Purdue University)
Dr. Monika Sommerhalter (Ph.D., Technische Universität Berlin)
Dr. Ruth Tinnacher (Ph.D., Colorado School of Mines)
Dr. Stephanie Zaleski (Ph.D., Northwestern University)

**For Faculty Profiles:**
http://www.csueastbay.edu/chemistry/faculty/index.html

**Research**

Faculty mentored research in Biochemistry, Organic Chemistry, Environmental Chemistry, Computational Chemistry, and Physical Chemistry

Almost all of our Plan A students conduct research in on-site laboratories, directed by one of the Department’s Faculty members. Candidates whose employers permit the use of their own facilities and approve the release of research findings may arrange to conduct research on their employer’s premises, subject to prior approval by the Department.

**Instruments and Facilities**

- Varian 500 MHz NMR Spectrometer
  (with an Indirect Detect probe for $^1$H, $^{19}$F, $^{13}$C, and $^{31}$P, and a Dual Broadband probe for $^{19}$F, $^{13}$C, $^{31}$P, $^{15}$N, $^{11}$B)

- Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES)

- Hewlett Packard HP1100 and HP1150 HPLCs
  (with UV/Vis and Fluorescence detection)

- Agilent Technologies Gas Chromatograph/Mass Spectrometer

- Bruker MicroESR Electron Paramagnetic Resonance Spectrometer

- Horiba Spectrofluorometer
  (with a stopped flow attachment)

- Initiator Microwave Synthesizers

- FP Liquid Chromatograph (FPLC)

- Perkin Elmer FTIR spectrometers

- ChemDoc Molecular Imager

- Liquid Scintillation Counter

- Total Organic Carbon/Total Inorganic Carbon Analyzer

- Computer Lab

**Admission Requirements**

Applicants need a bachelor’s degree equivalent to a BS degree in our Department and a GPA of $\geq 2.6$ in the major. GRE scores are not required.

An Undergraduate degree outside of Chemistry or Biochemistry may be used, but students may be required to take additional classes before advancing to candidacy.

**Plan Options**

**Plan A (Research-based Thesis)**

Involves conducting laboratory research and requires the writing of a University Thesis.

**Plan B (Paper/Comprehensive Exam)**

No research, but requires 1) extra coursework, 2) passing two written Comprehensive Exams, and 3) writing a literature review paper and defending it orally before a Faculty Committee.

**Biochemistry Concentration**

Plan A or B, with a focus in Biochemistry.