



# Chemistry A.S. Degree - Local GE

The Chemistry Program consists of courses designed to meet transfer requirements for chemical, physical, and biological science majors.

**Total Units: 62**

## First Year

### Semester 1

**16 Units**

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*	GE AREA
<b>CHEM 400</b> <sup>(Z)</sup> General Chemistry I	5	Intermediate algebra or eligibility for transfer-level mathematics and CHEM 300, 305, 309, or 1 year of high school chemistry with lab.	F, S, Su	CRC Area L5
<b>MATH 400</b> <sup>(Z)</sup> Calculus I	5	MATH 370, or MATH 372 and MATH 373	F, S	CRC Area L2
<b>CRC Area 1A-English Composition</b> <sup>(Z)</sup>	3	Recommend meeting with a counselor	F, S, Su	CRC Area L1A
<b>CRC Area 3-Arts &amp; Humanities</b> <sup>(Z)</sup>	3		F, S, Su	CRC Area L3

<sup>(Z)</sup> At least one section of this course is offered with free textbooks and is labeled as zero textbook costs (ZTC). If it is a GE area class or elective, there may be several ZTC offerings to fulfill the GE requirement. Use the Free Textbook filter to find these courses. Learn more on the [ZTC page of the college website](#).

### Semester 2

**17 Units**

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*	GE AREA
<b>CHEM 401</b> <sup>(Z)</sup> General Chemistry II	5	CHEM 400	F, S	CRC Area L5
<b>MATH 401</b> <sup>(Z)</sup> Calculus II	5	MATH 400	F, S, Su	CRC Area L2
<b>PHYS 411</b> <sup>(Z)</sup> Mechanics of Solids and Fluids	4	MATH 400	F, S, Su	CRC Area L5
<b>CRC Area 1B-Oral Communication</b> <sup>(Z)</sup>	3		F, S, Su	CRC Area L1B

## Career

### Options/Outlook:

Chemists conduct qualitative and quantitative chemical analyses or experiments in laboratories for quality or process control or to develop new products or knowledge. **Career opportunities require more than an associate degree.**

### A sample of reported job titles:

Air Quality Chemist, Analytical Chemist, Chemical Laboratory Scientist, Chemist, Forensic Chemist, Forensic Scientist, Quality Control Chemist (QC Chemist), Research Chemist, Scientist, Senior Chemist

### Projected job openings in California (2020-2030):

1,050

### Projected growth in California (2020-2030):

17%

### Median Salary in California with advanced degree (2021):

\$97,210/yr

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## Year 2

### Semester 3

17 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*	GE AREA
<b>CHEM 420</b> <b>Z</b> Organic Chemistry I	5	CHEM 401	F, S	CRC Area L5
<b>MATH 402</b> <b>Z</b> Calculus III	5	MATH 401	F, S	CRC Area L2
<b>PHYS 421</b> <b>Z</b> Electricity and Magnetism	4	MATH 401 & PHYS 411	F, S	CRC Area L5
<b>CRC Area 6-Ethnic Studies</b> <b>Z</b>	3		F, S, Su	CRC Area L6

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### Semester 4

12 Units

COURSE	UNITS	PRE-REQS^	SEMESTERS OFFERED*	GE AREA
<b>CHEM 421</b> <b>Z</b> Organic Chemistry II	5	CHEM 420	F, S	CRC Area L5
<b>PHYS 431</b> <b>Z</b> Heat, Waves, Light and Modern Physics	4	MATH 401 & PHYS 411	F, S	CRC Area L5
<b>CRC Area 4-Social &amp; Behavioral Sciences</b> <b>Z</b>	3		F, S, Su	CRC Area L4

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## Source:

<https://www.onetonline.org/link/summary/19-2031.00>

## Honors option:

The CRC Honors Program is designed specifically for academically accomplished students and for students with the potential for high achievement. Students who complete 15 units or more in honors-designated courses will earn special recognition as an Honors Scholar, a distinction that may entitle the student to guaranteed transfer and scholarship opportunities at select transfer colleges and universities.

## Transfer notes:

Please meet with a counselor for specific transfer course evaluation or transferring to a specific 4-year institution.

## General Education (GE):

Non-specified GE courses identified by CRC or Cal-GETC Area without pre- or co-requisites can be taken at any semester.

## About this map:

This program map represents one possible pathway to complete the program. Please see a counselor to create an education plan that is customized to meet your needs. This map is not a guarantee of course availability or financial aid applicability.

## Zero Textbook Costs (ZTC):

The Zero Textbook Costs designation and logo are added to any course that provides free access to all required instructional materials. These are typically shared with students through Canvas. Courses that are designated as ZTC may still require students to purchase supplemental materials such as lab coats, a calculator, art supplies, etc. See full definitions and searching tips on the [Zero Textbook Costs page](#) of the college website.

