***Chemistry:*** *Associate in Science for Transfer*

*CSU*

What gives fireworks their color? How does a drug test work? Chemistry is the central science behind these questions and many more. The chemistry major focuses on the study and creation of materials, pharmaceuticals, biological systems, environmental systems, and industrial processes.

***Please see a Pathways Counselor:*** Create an education plan customized to meet your needs. [Contact a Counselor](https://www.msjc.edu/hub/)

Transfer Majors/Award Focus

* Chemistry, A.S.-T CSU, UC

GE Pattern/Units

* GE Pattern: B
* Total Units: 67

**Program maps** indicate the major coursework and recommended general education courses to fulfill your degree in 2 years (approximately 15 units/semester or 30 units/year). If you are a part-time student, start Semester 1 courses and follow the course sequence. Some of the courses listed may be substituted by another course. Please view these options in the official course [catalog](https://catalog.msjc.edu/instructional-programs/).

***Semester 1 16 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| ✔ | COURSE | TITLE | UNIT |
| ⬜ | MATH-211 | Analytic Geometry and Calculus I | 4 |
| ⬜ | ENGL-101 | College Composition | 4 |
| ⬜ | CHEM-101 | General Chemistry I | 5 |
| ⬜ | COMM-100 or  COMM-104 | Public Speaking or  Argumentation and Debate | 3 |

***Semester 2 15 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| ✔ | COURSE | TITLE | UNIT |
| ⬜ | CHEM-102 | General Chemistry II | 5 |
| ⬜ | ENGL-103 | Critical Thinking and Writing | 3 |
| ⬜ | MATH-212 | Analytic Geometry and Calculus II | 4 |
| ⬜ | PS-101 | Introduction to American Government and Politics | 3 |

Career Options

Chemical Engineer (B, M, D)

Chemical Technician (A, B)

Biochemistry and biophysicist (B, D)

Find more careers: [msjc.emsicc.com](http://msjc.emsicc.com)

Required Education: SM: some college; C: Certificate; A: Associate, B: Bachelor’s, M: Master’s; D: Doctorate

Financial Aid

Financial aid is determined by the number of credit hours you take in a semester. Maximize your financial aid by taking 12-15 units per semester.

***Summer 1 – STEM ONLY 3 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| ✔ | COURSE | TITLE | UNIT |
| ⬜ | HIST-111 or  HIST-112 | U.S. History to 1877 or  U.S. History Since 1865 | 3 |

***Semester 3 18 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| ✔ | COURSE | TITLE | UNIT |
| ⬜ | MATH-213 | Analytic Geometry and Calculus III | 5 |
| ⬜ | BIOL-150 | General Biology I | 4 |
| ⬜ | CHEM-112 | Organic Chemistry I | 5 |
| ⬜ | PHY-201 | Mechanics and Wave Motion | 4 |

***Semester 4 15 Units***

|  |  |  |  |
| --- | --- | --- | --- |
| ✔ | COURSE | TITLE | UNIT |
| ⬜ | CHEM-113 | Organic Chemistry II | 5 |
| ⬜ | PHY-202 | Electricity and Magnetism | 4 |
| ⬜ | ART-104 | World Art | 3 |
| ⬜ | HIST-104 | World History Since 1500 | 3 |

Work Experience

Sign up for a special project or internship opportunity. Gain [work experience](https://msjc.edu/careereducation/cwee/index.html) and earn credits.