# Chemistry

Major

A major in chemistry consists of coursework distributed as follows:

## Core Courses

All required:

| Item # | Title | Credits |
|---|---|---|
| CH 110 | General Chemistry | 4.0 |
| CH 203 | Organic Chemistry I | 4.0 |
| CH 211 | Quantitative Analysis | 4.0 |
| CH 231 | Inorganic Chemistry | 4.0 |
| | Sub-Total Credits | 16 |

## Scientific Breadth Courses

Select two:

| Item # | Title | Credits |
|---|---|---|
| BI 110 | General Biology | 4.0 |
| CS 160 | Introduction to Computer Science | 4.0 |
| PY 181 | General Physics I | 4.0 |
| PY 182 | General Physics II | 4.0 |
| PY 201 | College Physics I | 4.0 |
| PY 202 | College Physics II | 4.0 |
| | Sub-Total Credits | 8 |

## Advanced Courses

Select three:

| Item # | Title | Credits |
|---|---|---|
| CH 304 | Organic Chemistry II | 4.0 |
| CH 309 | Biochemistry I | 4.0 |
| CH 314 | Instrumental Methods: Forensics | 4.0 |
| CH 323 | Thermodynamics | 4.0 |
| CH 327 | Medicinal Chemistry | 4.0 |
| CH 332 | Advanced Inorganic Chemistry | 4.0 |
| CH 365 | Quantum Theory & Spectroscopy | 4.0 |
| CH 410 | Biochemistry II | 4.0 |
| CH 461 | Independent Study in Chemistry | 1.0-4.0 |
| CH 465 | Independent Research in Chemistry | 1.0-4.0 |
| | Sub-Total Credits | 12 |

## Capstone

Both required:

| Item # | Title | Credits |
|---|---|---|
| CH 441 | Senior Seminar I | 2.0 |
| CH 442 | Senior Seminar II | 2.0 |
| | Sub-Total Credits | 4 |

## Students may elect to concentrate in a particular sub-field as follows:

### Analytical Chemistry

| Item # | Title | Credits |
|---|---|---|
| CH 211 | Quantitative Analysis | 4.0 |
| CH 314 | Instrumental Methods: Forensics | 4.0 |
| | Sub-Total Credits | 8 |

### Biochemistry:

| Item # | Title | Credits |
|---|---|---|
| CH 309 | Biochemistry I | 4.0 |
| CH 410 | Biochemistry II | 4.0 |
| BI 110 | General Biology | 4.0 |
| BI 307 | Cell and Molecular Biology | 4.0 |
| | Sub-Total Credits | 16 |

### Inorganic Chemistry

| Item # | Title | Credits |
|---|---|---|
| CH 231 | Inorganic Chemistry | 4.0 |
| CH 304 | Organic Chemistry II | 4.0 |
| CH 332 | Advanced Inorganic Chemistry | 4.0 |
| | Sub-Total Credits | 12 |

### Physical Chemistry:

| Item # | Title | Credits |
|---|---|---|
| CH 314 | Instrumental Methods: Forensics | 4.0 |
| CH 323 | Thermodynamics | 4.0 |
| CH 365 | Quantum Theory & Spectroscopy | 4.0 |
| | Sub-Total Credits | 12 |

### Medicinal Chemistry

| Item # | Title | Credits |
|---|---|---|
| CH 304 | Organic Chemistry II | 4.0 |
| CH 327 | Medicinal Chemistry | 4.0 |
| | Sub-Total Credits | 8 |

# Pursuit of Graduate Chemistry

Students intending to pursue admission to graduate programs in chemistry or related fields are encouraged to complete the following coursework as described by the American Chemical Society (ACS):

| Item # | Title | Credits |
|---|---|---|
| CH 110 | General Chemistry | 4.0 |
| PY 201 | College Physics I | 4.0 |
| PY 202 | College Physics II | 4.0 |
| MA 213 | Calculus I | 4.0 |
| MA 223 | Calculus II | 4.0 |
| MA 233 | Calculus III | 4.0 |
| CH 203 | Organic Chemistry I | 4.0 |
| CH 211 | Quantitative Analysis | 4.0 |
| CH 231 | Inorganic Chemistry | 4.0 |
| CH 323 | Thermodynamics | 4.0 |
| CH 309 | Biochemistry I | 4.0 |
| CH 304 | Organic Chemistry II | 4.0 |
| CH 314 | Instrumental Methods: Forensics | 4.0 |
| CH 332 | Advanced Inorganic Chemistry | 4.0 |
| CH 365 | Quantum Theory & Spectroscopy | 4.0 |
| | Sub-Total Credits | 60 |
| | Total Credits | 40 |