

# 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     |

## Scientific Breadth Courses

Select two:

| Item # | Title                            | Credits |
|--------|----------------------------------|---------|
| BI 110 | Biological Investigation         | 4.0     |
| CS 160 | Introduction to Computer Science | 4.0     |
| PY 201 | College Physics I                | 4.0     |
| PY 202 | College Physics II               | 4.0     |

## Advanced Courses

Select three:

| Item # | Title                             | Credits |
|--------|-----------------------------------|---------|
| CH 304 | Organic Chemistry II              | 4.0     |
| CH 309 | Biochemistry I                    | 4.0     |
| CH 312 | Instrumental Methods of Analysis  | 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 |

## Capstone

Both required:

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

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

### Analytical Chemistry

| Item # | Title                            | Credits |
|--------|----------------------------------|---------|
| CH 211 | Quantitative Analysis            | 4.0     |
| CH 312 | Instrumental Methods of Analysis | 4.0     |

### Biochemistry:

| Item # | Title                      | Credits |
|--------|----------------------------|---------|
| CH 309 | Biochemistry I             | 4.0     |
| CH 410 | Biochemistry II            | 4.0     |
| BI 110 | Biological Investigation   | 4.0     |
| BI 307 | Cell and Molecular Biology | 4.0     |

### 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     |

### Physical Chemistry:

| Item # | Title                            | Credits |
|--------|----------------------------------|---------|
| CH 323 | Thermodynamics                   | 4.0     |
| CH 365 | Quantum Theory & Spectroscopy    | 4.0     |
| CH 312 | Instrumental Methods of Analysis | 4.0     |

### Medicinal Chemistry

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

## 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 312               | Instrumental Methods of Analysis | 4.0       |
| CH 332               | Advanced Inorganic Chemistry     | 4.0       |
| CH 365               | Quantum Theory & Spectroscopy    | 4.0       |
| <b>Total Credits</b> |                                  | <b>40</b> |