

Possible Degree Pathways for earning a B.S. CHEM degree (124 total credits)

Pathways include **all major** and LSA requirements.

- 10 credits of Physics required for the major will fulfill all of the NS distribution requirements.
- Math prerequisites will fulfill QR1 and Mathematical and Symbolic Analysis requirements.
- Choose a HU, SS, or other course to fulfill the Race and Ethnicity requirement
- ULWR is fulfilled by CHEM 482

For graduate school and industrial careers, research experience is very important. Students are encouraged to earn 4 credits of undergraduate research (CHEM 399) to fulfill the degree requirement as well as 4 additional credits under CHEM 398.

Pre-health students: Chemistry elective should be CHEM 351

Psych 111 and Soc 100 or 302 should be chosen for SS credits

Bio 171, Bio 172, Bio 173, an upper level biology course (lecture + lab) are needed

Stats 250 is highly recommended

Path A (for those starting in Organic Chemistry Fall of freshman year)

| Year 1 Fall | credit hours | Year 1 Winter | credit hours |
|-------------------------------|--------------|-------------------------------------|--------------|
| Language 1 | 4 | Language 2 | 4 |
| CHEM 210 Organic I | 3 | CHEM 215 Organic II | 3 |
| CHEM 211 Organic I Lab | 2 | CHEM 216 Organic II Lab | 2 |
| Math 115 Calc I | 4 | FYWR | 4 |
| SS | 3 | Math 116 Calc 2 | 3 |
| | 16 | | 16 |
| Year 2 Fall | | Year 2 Winter | |
| Language 3 | 4 | Language 4 | 4 |
| CHEM 260 Chemical Principles | 3 | CHEM 302 Inorganic I | 3 |
| Phys 140 | 4 | CHEM 241 Analytical I | 2 |
| Phys 141 Lab | 1 | CHEM 242 Analytical Lab | 2 |
| HU | 3 | HU | 4 |
| | 16 | | 15 |
| Year 3 Fall | | Year 3 Winter | |
| CHEM 262 Mathematical Methods | 4 | Phys 240 | 4 |
| CHEM 402 Inorganic II | 3 | Phys 241 Lab | 1 |
| CHEM 482/ULWR Inorganic Lab | 3 | CHEM 447 Analytical II | 3 |
| CHEM 399 Undergrad Research | 1 | CHEM elective | 3 |
| HU/SS/CE/ID | 3 | CHEM 399 Undergrad Research | 1 |
| Other credits | 1 | Other credits | 3 |
| | 15 | | 15 |
| Year 4 Fall | | Year 4 Winter | |
| CHEM 461 Physical (Quantum) | 3 | CHEM 463 Physical (Thermo/kinetics) | 3 |
| CHEM 462 Computational Lab | 1 | CHEM 483 Physical/Analytical Lab | 3 |
| CHEM 399 Undergrad Research | 1 | CHEM 399 Undergrad Research | 1 |
| SS | 4 | Other credits | 9 |
| Other credits | 7 | | |
| | 15 | | 16 |

Path B (for those starting in Organic Chemistry Winter of freshman year)

| Year 1 Fall | | credit hours | Year 1 Winter | | credit hours |
|------------------------------------|--|--------------|-------------------------------------|--|--------------|
| Language 1 | | 4 | Language 2 | | 4 |
| Math 115 Calc I | | 4 | CHEM 210 Organic I | | 3 |
| CHEM 125/126 General Chemistry Lab | | 2 | CHEM 211 Organic I Lab | | 2 |
| CHEM 130 General Chemistry | | 3 | FYWR | | 4 |
| SS | | 3 | Math 116 Calc 2 | | 3 |
| | | 16 | | | 16 |
| Year 2 Fall | | | Year 2 Winter | | |
| Language 3 | | 4 | Language 4 | | 4 |
| CHEM 215 Organic II | | 3 | CHEM 302 Inorganic I | | 3 |
| CHEM 216 Organic II Lab | | 2 | CHEM 260 Chemical Principles | | 3 |
| Phys 140 | | 4 | Phys 240 | | 4 |
| Phys 141 Lab | | 1 | Phys 241 Lab | | 1 |
| Other credits | | 2 | | | |
| | | 16 | | | 15 |
| Year 3 Fall | | | Year 3 Winter | | |
| CHEM 241 Analytical I | | 2 | CHEM 262 Mathematical Methods | | 4 |
| CHEM 242 Analytical Lab | | 2 | CHEM 447 Analytical II | | 3 |
| CHEM 482/ULWR Inorganic Lab | | 3 | CHEM elective | | 3 |
| CHEM 399 Undergrad Research | | 1 | CHEM 399 Undergrad Research | | 2 |
| HU | | 4 | HU/SS/CE/ID | | 3 |
| Other credits | | 3 | | | |
| | | 15 | | | 15 |
| Year 4 Fall | | | Year 4 Winter | | |
| CHEM 461 Physical (Quantum) | | 3 | CHEM 463 Physical (Thermo/kinetics) | | 3 |
| CHEM 462 Computational Lab | | 1 | CHEM 483 Physical/Analytical Lab | | 3 |
| CHEM 402 Inorganic II | | 3 | CHEM 399 Undergrad Research | | 1 |
| CHEM 399 Undergrad Research | | 1 | Other credits | | 9 |
| SS | | 4 | | | |
| HU | | 3 | | | |
| | | 15 | | | 16 |

Path C: for those exploring more during freshman year and/or taking Organic Chemistry sophomore year

| Year 1 Fall | | Year 1 Winter | |
|------------------------------|--------------|-------------------------------------|--------------|
| | credit hours | | credit hours |
| Language 1 | 4 | Language 2 | 4 |
| FYWR | 4 | CHEM 125/126 General Chemistry Lab | 2 |
| other credits | 4 | CHEM 130 General Chemistry | 3 |
| HU | 3 | SS | 3 |
| | | Math 115 Calc 1 | 4 |
| | 15 | | 16 |
| Year 2 Fall | | Year 2 Winter | |
| Language 3 | 4 | Language 4 | 4 |
| CHEM 210 Organic I | 3 | CHEM 215 Organic II | 3 |
| CHEM 211 Organic lab | 2 | CHEM 216 Organic II Lab | 2 |
| Other credits | 3 | Physics 140 | 4 |
| HU | 4 | Physics 141 Lab | 1 |
| | | other credits | 1 |
| | 16 | | 15 |
| Year 3 Fall | | Year 3 Winter | |
| CHEM 260 Chemical Principles | 3 | CHEM 302 Inorganic I | 3 |
| Phys 240 | 4 | CHEM 241 Analytical I | 2 |
| Phys 241 Lab | 1 | CHEM 242 Analytical I Lab | 2 |
| SS | 4 | CHEM 262 Mathematical Methods | 4 |
| Math 116 Calc II | 4 | CHEM 399 Undergrad Research | 2 |
| | | HU/SS/CE/ID | 3 |
| | 16 | | 16 |
| Year 4 Fall | | Year 4 Winter | |
| CHEM 402 Inorganic II | 3 | CHEM 463 Physical (Thermo/Kinetics) | 3 |
| CHEM 482/ULWR Inorganic Lab | 3 | CHEM 447 Analytical II | 3 |
| CHEM 461 Physical (Quantum) | 3 | CHEM 483 Physical/Analytical Lab | 3 |
| CHEM 462 Computational Lab | 1 | CHEM elective | 3 |
| CHEM 399 Undergrad Research | 2 | Other credits | 3 |
| Other credits | 3 | | |
| | 15 | | 15 |