uinnesota state university Chemistry BA Roadmap
Program Total Credits
Catalog Bachelor of Arts: Chemistry

The plan below is one of several possible ways for you to complete this degree.
Your individualized plan may look different if you have already fulfilled some requirements.
Your Financial Aid Award may require additional term credits for full-time funding.
You must complete all university and program requirements successfully to complete this degree (GPA, 120 credits, LASC, WI, residency)

| Curriculum | Course |  | Course Title | Credits | Take <br> When |
| :---: | :---: | :---: | :---: | :---: | :---: |

## 1st Year

| Core Requirement: | LASC 3 | CHEM 150 | General Chemistry I Lecture | 3.00 | 1st Fall | 15.00 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Core Requirement: | LASC 3 | 1 CHEM 150L | General Chemistry I Lab | 1.00 | 1st Fall |  |
| Graduation Requirement: | First-Year Experience Course | FYE 101 | First Year Experience | 1.00 | 1st Fall |  |
|  | LASC 2 | 1 |  | 3.00 | 1st Fall |  |
|  | LASC Elective | 8 |  | 3.00 | 1st Fall |  |
| Related Requirement: | LASC 4 | 2 MATH 261 | Calculus I | 4.00 | 1st Fall |  |
| Core Requirement: | LASC 3 | CHEM 210 | General Chemistry II Lecture | 3.00 | 1st Spring | 15.00 |
| Core Requirement: | LASC 3 | 1 CHEM 210L | General Chemistry II Lab | 1.00 | 1st Spring |  |
| Core Requirement: |  | CHEM 297 | Introduction to Research | 1.00 | 1st Spring |  |
| Related Requirement: | LASC 4 | 3 MATH 262 | Calculus II | 4.00 | 1st Spring |  |
|  | LASC 1B | ENGL 101 | English Composition | 3.00 | 1st Spring |  |
|  | LASC/WI Elective | 8 |  | 3.00 | 1st Spring |  |

2nd Year

| Core Requirement: Core Requirement: Related Requirement: |  | CHEM 350 | Organic Chemistry I Lecture | 3.00 | 2nd Fall | 14.00 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | CHEM 355 | Organic Chemistry I Lab | 1.00 | 2nd Fall |  |
|  | LASC 3 | 5 PHYS 200 | Physics I with Calculus and Lab | 4.00 | 2nd Fall |  |
|  | LASC Elective | 8 |  | 3.00 | 2nd Fall |  |
|  | LASC/WI Elective | 8 |  | 3.00 | 2nd Fall |  |
| Core Requirement: Core Requirement: Core Requirement: Related Requirement: |  | 10 CHEM 360 | Organic Chemistry II Lecture | 3.00 | 2nd Spring | 15.00 |
|  |  | CHEM 365 | Organic Chemistry II Lab | 1.00 | 2nd Spring |  |
|  |  | 9 CHEM 380/380 Analytical Chemistry |  | 4.00 | 2nd Spring |  |
|  | LASC 3 | 5 PHYS 201 COMM 100 | Physics II with Calculus and Lab <br> Speech Communication | $\begin{aligned} & 4.00 \\ & 3.00 \end{aligned}$ | 2nd Spring <br> 2nd Spring |  |
|  | LASC 1A |  |  |  |  |  |
| 3rd Year |  |  |  |  |  |  |
| Core Requirement: Core Requirement: Core Requirement: Upper level electives: |  | 10 CHEM 300CHEM 400CHEM 4056 | Inorganic Chemistry I <br> Biochemistry I <br> Biochemistry I Lab | 3.00 | 3rd Fall | 15.00 |
|  |  |  |  | $\begin{aligned} & 3.00 \\ & 1.00 \\ & 4.00 \end{aligned}$ | 3rd Fall |  |
|  |  |  |  |  | 3rd Fall |  |
|  |  |  |  |  | 3rd Fall |  |
|  | LASC Elective |  |  | $\begin{aligned} & 4.00 \\ & 4.00 \\ & \hline \end{aligned}$ | 3rd Fall |  |
| Core Requirement: Upper level electives: |  | 7 CHEM 4506 | Physical Chemistry: Thermodynamics | 3.00 | 3rd Spring 3rd Spring | 15.00 |
|  |  |  |  | 4.00 |  |  |
|  | LASC Elective |  |  | 4.00 | 3rd Spring |  |
| Writing Intensive: | 200-level or higher |  |  | 4.00 | 3rd Spring |  |

## 4th Year

| Core Requirement: | WI for major | CHEM 375 | Team-Based Research | 4.00 | 4th Fall | 16.00 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Upper level electives: |  | 6 |  | 4.00 | 4th Fall |  |
| Electives: |  | 4 |  | 4.00 | 4th Fall |  |
| Electives: |  | 4 |  | 4.00 | 4th Fall |  |
| Upper level electives: |  | 6 |  | 4.00 | 4th Spring | 15.00 |
| Electives: |  | 4 |  | 4.00 | 4th Spring |  |
| Electives: |  | 4 |  | 4.00 | 4th Spring |  |
| Electives: |  | 4 |  | 3.00 | 4th Spring |  |

${ }^{1}$ Chem 275 can be taken in place of either general chemistry lab and counts as a LASC 2. Students in LC will either take Biol 100 or Chem 275
${ }^{2}$ ACT math score is needed to inform whether a student should begin directly in calculus or a lower math class.
${ }^{3}$ Math 234 or Biol 275 can be taken instead of Calculus II.
${ }^{4}$ In considering electives, keep in mind that all of the Liberal Arts and Science Curriculum requirements must be fulfilled.
${ }^{5}$ If a student has not taken Calculus, Phys 160/161 can be taken instead of Phys 200/201.
${ }^{6}$ At least 16 credits in $300+$ level science/math disciplines (AST/MATH/BCBT/BIOL/CHEM/PHYS/GEOS/CSIS) must be taken.
${ }^{7}$ An alternative to Physical Chemistry-Thermo, the spring physical chemistry course, is to take Physical Chemistry-Quantum Chem 460, which is offered in the fall of evennumbered years or BCBT 450 Molecular and Biophysical chemistry (each spring).
${ }^{8}$ Classes like HIST 374/379 (5/10/WI), HIST 105 (5/8), POL 160 (5/8), POL 120 (5/9), ENGL 407 (6/10), PHIL 215/311/312/318 (6/9/WI?), PHIL 102/120/235 (6/7), MUS $240(6 / 7)$, PHIL 302 (6/8) double count. The right set of 4 of these takes out all required LASC 5, 6, 7, 8, 9, 10 +2 WI .
${ }^{9}$ An alternative to Chem 380 is Chem 480. Chem 480 does not have a separate lab and is taught in falls of odd years.
${ }^{10}$ Students must take 2 additional classes in chemistry from a list that also includes Chem 410, Chem 420, or BCBT 463.

