

## B.S. in Chemistry 2020-2021 Option 1 - CWILT

| FIRST YEAR  |         |   |         |   |         |
|---|---------|---|---------|---|---------|
| Fall  | Credits | Interim   | Credits | Spring  | Credits |
| <a href="#">CHE 113</a><br>& <a href="#">CHE 113D</a><br>General Chemistry I and General Chemistry I Lab *1   | 4       | <a href="#">GES 125 Introduction to the Creative Arts</a> | 4       | <a href="#">CHE 214</a><br>& <a href="#">CHE 215</a><br>(or elective) General Chemistry II General Chemistry II Lab *1                | 4       |
| OR  |         |   |         | <a href="#">MAT 125 Calculus 2</a>  | 4       |
| <a href="#">CHE 208</a><br>& <a href="#">CHE 208D</a><br>Accelerated General Chemistry and Accelerated General Chemistry Lab *1   |         |   |         | <a href="#">CHE 200 Laboratory Safety and Chemical Hygiene</a>  | 1       |
| <a href="#">MAT 124M Calculus 1</a>   | 4       |   |         | <a href="#">BIB 101 Introduction to the Bible</a>   | 3       |
| <a href="#">GES 130 Christianity Western Culture</a>  | 4       |   |         | <a href="#">GES 140 Introduction to Wellbeing</a>   | 3       |
| <a href="#">GES 160 Inquiry Seminar</a>   | 3       |   |         |   |         |
|   | 15      |   | 4       |   | 15      |
| SECOND YEAR   |         |   |         |   |         |
| Fall  | Credits | Interim   | Credits | Spring  | Credits |
| <a href="#">CHE 224</a><br>& <a href="#">CHE 225</a><br>Organic Chemistry I and Organic Chemistry I Lab   | 4       | Elective  | 3       | <a href="#">CHE 226</a><br>& <a href="#">CHE 227</a><br>Organic Chemistry II and Organic Chemistry II Lab                             | 4       |
| <a href="#">MAT 222</a> or <a href="#">223</a> Differential Equations   | 3       |   |         | <a href="#">PHY 296</a><br>& <a href="#">PHY 297</a><br>General Physics II and General Physics II Lab                                 | 4       |
| <a href="#">PHY 292</a><br>& <a href="#">PHY 292D</a><br>General Physics I and General Physics I Lab  | 4       |   |         | <a href="#">THE 201 Christian Theology</a>  | 3       |
| Second Language (S) course *2   | 4       |   |         | Contemporary Western Life and Thought (L) course  | 3       |
|   | 15      |   | 3       |   | 14      |
| THIRD YEAR  |         |   |         |   |         |
| Fall  | Credits | Interim   | Credits | Spring  | Credits |
| <a href="#">CHE 395 Chemistry Seminar: Research and Professional Development</a>  | 1       | Science, Technology, and Society (K) course               | 3       | <a href="#">CHE 312</a><br>& <a href="#">CHE 313</a><br>Quantitative Analysis and Quantitative Analysis Lab                           | 4       |
| <a href="#">CHE 344</a><br>& <a href="#">CHE 345</a><br>Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab | 4       |   |         | <a href="#">CHE 348</a><br>& <a href="#">CHE 349</a><br>Quantum Chemistry and Spectroscopy and Quantum Chemistry and Spectroscopy Lab | 4       |
| Chemistry Elective  | 4       |   |         | <a href="#">CHE 490 Chemistry Seminar: Research</a>   | 2       |
| Interpreting Biblical Themes (J) course   | 3       |   |         | Comparative Systems (G) course  | 3       |
| World Cultures (U) course   | 3       |   |         | Leisure and Lifetime Sports (Q) course  | 1       |
|   | 15      |   | 3       |   | 14      |
| FOURTH YEAR   |         |   |         |   |         |
| Fall  | Credits | Interim   | Credits | Spring  | Credits |
| <a href="#">CHE 320</a><br>& <a href="#">CHE 321</a><br>Instrumental Analysis and Instrumental Analysis Lab   | 4       | Interim Off   | 0       | <a href="#">CHE 364</a><br>& <a href="#">CHE 365</a><br>Advanced Inorganic Chemistry and Advanced Inorganic Chemistry Lab             | 4       |
| <a href="#">CHE 388</a><br>& <a href="#">CHE 389</a><br>Biochemistry I and Biochemistry I Lab   | 4       |   |         | <a href="#">CHE 494 Chemistry Seminar: Research Presentation</a>  | 1       |
| Cross-cultural Experience (Z) course  | 0-3     |   |         | Chemistry Elective  | 4       |
| Electives   | 4       |   |         | Artistic Experience (A) course  | 0-3     |
|   |         |   |         | Contemporary Christian Issues (P) course  | 3       |
|   | *12-15  |   | 0       |   | *12-15  |
| <b>Total Credits 122-128</b>  |         |   |         |   |         |

\*1. [CHE 208/CHE 208D](#) is a one-semester course that meets the requirements of [CHE 113/CHE 113D](#) and [CHE 214/CHE 215](#). Students taking [CHE 208/CHE 208D](#) may choose an elective in the Spring of their Freshman year.

\*2. Students must complete through the second semester of a first year language course or equivalent (Check the catalog for details of this option.)

This program assumes that a student will use [CHE 113/CHE 113D](#) or [CHE 208/CHE 208D](#) and [MAT 124M](#) to meet the General Education Laboratory Science (D) and Mathematics (M) course requirements. Most financial aid packages stipulate 12 credits/semester; Minnesota state grants are reduced when credit load falls below 15 credits/semester. (Interim credits may be split between fall and spring for state grant purposes only.)

## B.S. in Chemistry 2020-2021: Option 2 - Humanities

| FIRST YEAR   |         |  |         |  |         |
|--|---------|--|---------|--|---------|
| Fall   | Credits | Interim  | Credits | Spring   | Credits |
| <a href="#">CHE 113 &amp; CHE 113D</a><br>General Chemistry I and General Chemistry I Lab *1   | 4       | <a href="#">GES 147 Humanities II: Renaissance and Reformation</a> | 4       | <a href="#">CHE 214 &amp; CHE 215</a><br>(or elective) General Chemistry II General Chemistry II Lab *1                | 4       |
| OR   |         |  |         | <a href="#">MAT 125 Calculus 2</a>   | 4       |
| <a href="#">CHE 208 &amp; CHE 208D</a><br>Accelerated General Chemistry and Accelerated General Chemistry Lab *1   |         |  |         | <a href="#">GES 244 Humanities III: European Enlightenment and American Culture to 1877</a>                            | 4       |
| <a href="#">MAT 124M Calculus 1</a>  | 4       |  |         | Second Language (S) course *2  | 4       |
| <a href="#">GES 140 Introduction to Wellbeing</a>  | 3       |  |         |  |         |
| <a href="#">GES 145 Humanities I: Greco-Roman through Middle Ages</a>  | 4       |  |         |  |         |
|  | 15      |  | 4       |  | 16      |
| SECOND YEAR  |         |  |         |  |         |
| Fall   | Credits | Interim  | Credits | Spring   | Credits |
| <a href="#">CHE 224 &amp; CHE 225</a><br>Organic Chemistry I and Organic Chemistry I Lab   | 4       | World Cultures (U) course  | 3       | <a href="#">BIB 101 Introduction to the Bible</a>  | 3       |
| <a href="#">MAT 222 or 223</a> Differential Equations  | 3       |  |         | <a href="#">CHE 200 Laboratory Safety and Chemical Hygiene</a>   | 1       |
| <a href="#">PHY 292 &amp; PHY 292D</a><br>General Physics I and General Physics I Lab  | 4       |  |         | <a href="#">CHE 226 &amp; CHE 227</a><br>Organic Chemistry II and Organic Chemistry II Lab                             | 4       |
| <a href="#">GES 246 Humanities IV: Modern and Contemporary Western Culture</a>   | 4       |  |         | <a href="#">PHY 296 &amp; PHY 297</a><br>General Physics II and General Physics II Lab                                 | 4       |
|  |         |  |         | Elective   | 4       |
|  | 15      |  | 3       |  | 16      |
| THIRD YEAR   |         |  |         |  |         |
| Fall   | Credits | Interim  | Credits | Spring   | Credits |
| <a href="#">CHE 344 &amp; CHE 345</a><br>Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics,<br><a href="#">CHE 395 Chemistry Seminar: Research and Professional Development</a> | 4       | Science, Technology, and Society (K) course                        | 3       | <a href="#">CHE 312 &amp; CHE 313</a><br>Quantitative Analysis and Quantitative Analysis Lab                           | 4       |
| <a href="#">CHE 395 Chemistry Seminar: Research and Professional Development</a>   | 1       |  |         | <a href="#">CHE 348 &amp; CHE 349</a><br>Quantum Chemistry and Spectroscopy and Quantum Chemistry and Spectroscopy Lab | 4       |
| Interpreting Biblical Themes (J) course  | 3       |  |         | <a href="#">CHE 490 Chemistry Seminar: Research</a>  | 2       |
| Electives  | 8       |  |         | Comparative Systems (G) course   | 3       |
|  |         |  |         | Leisure and Lifetime Sports (Q) course   | 1       |
|  | 16      |  | 3       |  | 14      |
| FOURTH YEAR  |         |  |         |  |         |
| Fall   | Credits | Interim  | Credits | Spring   | Credits |
| <a href="#">CHE 320 &amp; CHE 321</a><br>Instrumental Analysis and Instrumental Analysis Lab   | 4       | Interim Off  |         | <a href="#">CHE 364 &amp; CHE 365</a><br>Advanced Inorganic Chemistry and Advanced Inorganic Chemistry Lab             | 4       |
| <a href="#">CHE 388 &amp; CHE 389</a><br>Biochemistry I and Biochemistry I Lab   | 4       |  |         | <a href="#">CHE 494 Chemistry Seminar: Research Presentation</a>   | 1       |
| Chemistry Elective   | 4       |  |         | Chemistry Elective   | 4       |
| Cross Cultural Experience (Z) course   | 0-3     |  |         | Artistic Experience (A) course   | 0-3     |
|  |         |  |         | Contemporary Christian Issues (P) course   | 3       |
|  | *12-15  |  | 0       |  | *12-15  |
| <b>Total Credits 126-132</b>   |         |  |         |  |         |

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