

This guide is intended for students completing the Chemistry A.S. Transfer Pathway with the intent to transfer to Bethel University and complete the Chemistry B.A., Chemistry B.S., Biochemistry B.A., or Biochemistry/Molecular Biology B.S. degree.

All courses must be completed with a C or better to transfer. If planning to apply to graduate school, courses should be graded a B or better. **Note: All labs must be done in person to transfer to Bethel.**

| Minnesota North College course | Credits | Bethel University course |
|---|---------|--|
| CHEM 1521 General Chemistry I | 4 | CHE 113 and 113D General Chemistry I w/lab |
| CHEM 1522 General Chemistry II | 4 | CHE 214 and 215 General Chemistry II w/lab |
| CHEM 2311 Organic Chemistry I | 5 | CHE 224 and 225 Organic Chemistry I w/lab |
| CHEM 2312 Organic Chemistry II | 5 | CHE 226 and 227 Organic Chemistry II w/lab |
| MATH 1311 Calculus I | 5 | MAT 124M Calculus I |
| MATH 1312 Calculus II | 4 | MAT 125 Calculus II |
| PHYS 2261 General Physics I | 4 | PHY 292 and 292D General Physics I w/lab |
| PHYS 2262 General Physics II | 4 | PHY 296 and 297 General Physics II w/lab |
| Any additional courses required to complete A.S. degree | | |
| Total credits for A.S. degree | 60 | |

| Remaining major courses for Chemistry B.A. degree | Credits |
|---|---------|
| CHE 200 Laboratory Safety and Chemical Hygiene | 1 |
| CHE 312 & 313 Quantitative Analysis and Quantitative Analysis Lab | 4 |
| CHE 344 & 345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab | 4 |
| CHE 395 Chemistry Seminar: Research and Professional Development | 1 |
| CHE 490 Chemistry Seminar: Research | 2 |
| CHE 494 Chemistry Seminar: Research Presentation | 1 |
| Choose electives at the 3XX or 4XX level | 11 |
| | |
| Total major specific credits | 24 |

| Remaining major courses for Chemistry B.S. degree (ACS certified major) | Credits |
|---|---------|
| CHE 200 Laboratory Safety and Chemical Hygiene | 1 |
| CHE 312 & 313 Quantitative Analysis and Quantitative Analysis Lab | 4 |
| CHE 320 Instrumental Analysis | 3 |
| CHE 344 & 345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab | 4 |
| CHE 348 Quantum Chemistry and Spectroscopy | 3 |
| CHE 364 Inorganic Chemistry | 4 |
| CHE 388 & 389 Biochemistry I and Biochemistry I Lab | 4 |
| CHE 395 Chemistry Seminar: Research and Professional Development | 1 |
| CHE 396 & 397 Biochemistry II and Biochemistry II Lab | 4 |
| CHE 490 Chemistry Seminar: Research | 2 |
| CHE 494 Chemistry Seminar: Research Presentation | 1 |
| | |
| Total major specific credits | 31 |

| Remaining major courses for Biochemistry B.A. degree | Credits |
|---|---------|
| BIO 124 & 124D Integrative Biology: Genes, Cells, Change and Integrative Biology: Genes, Cells, Change Lab** | 4 |
| BIO 128 & 128D Integrative Biology: Metabolism, Energy, Biodiversity and Integrative Biology: Metabolism, Energy, Biodiversity Lab** | 4 |
| CHE 200 Laboratory Safety and Chemical Hygiene | 1 |
| CHE 388 & 389 Biochemistry I and Biochemistry I Lab | 4 |
| CHE 395 Chemistry Seminar: Research and Professional Development | 1 |
| CHE 396 & 397 Biochemistry II and Biochemistry II Lab | 4 |
| CHE 490 Chemistry Seminar: Research | 2 |
| CHE 494 Chemistry Seminar: Research Presentation | 1 |
| Choose from any 3XX level applied health science, biology, chemistry, engineering, environmental science, neuroscience, or physics courses from approved list | 12 |
| **if not transferred from community college | |
| | |
| Total major specific credits | 25-32 |

| Remaining major courses for Biochemistry/Molecular Biology B.S. degree | Credits |
|--|---------|
| BIO 124 & 124D Integrative Biology: Genes, Cells, Change and Integrative Biology: Genes, Cells, Change Lab** | 4 |
| BIO 128 & 128D Integrative Biology: Metabolism, Energy, Biodiversity and Integrative Biology: Metabolism, Energy, Biodiversity Lab** | 4 |
| BIO 332 & BIO 333 Genetics & lab | 4 |
| BIO 354 & BIO 355 Cell Biology & lab | 4 |
| BIO 396 & BIO 397 Molecular Biology & lab | 4 |
| CHE 200 Laboratory Safety and Chemical Hygiene | 1 |
| CHE 312 & CHE 313 Quantitative Analysis & lab | 4 |
| CHE 344 & 345 Thermodynamics, Kinetics, and Statistical Mechanics and Thermodynamics, Kinetics, and Statistical Mechanics Lab | 4 |
| CHE 388 & 389 Biochemistry I and Biochemistry I Lab | 4 |
| CHE 396 & 397 Biochemistry II and Biochemistry II Lab | 4 |
| Choose one of the following research sequences: BIO 399, 495, 496, 497, & 499 OR CHE 395, 490, & 494 | 4-6 |
| | |
| **if not transferred from community college | |
| Total major specific credits | 41-43 |

| Remaining graduation requirements for Bethel degree | Credits |
|--|---------|
| GES 130 Christianity & Western Culture | 4 |
| Biblical Foundations course | 4 |
| Choose 2 Cultural Intelligence courses (if not transferred in) | 8 |
| Contemporary Christian Issue (P) | 2 |
| | |
| Electives to reach 122 credits | Varies |
| Total credits for degree | 122+ |