

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.**

Central Lakes College course	Credits	Bethel University course
CHEM 1424 Chemical Principles I	5	CHE 113 and 113D General Chemistry I w/lab
CHEM 1425 Chemical Principles II	5	CHE 214 and 215 General Chemistry II w/lab
CHEM 2472 Organic Chemistry I	5	CHE 224 and 225 Organic Chemistry I w/lab
CHEM 2473 Organic Chemistry II	5	CHE 226 and 227 Organic Chemistry II w/lab
MATH 1477 Calculus I or MATH 1480 Honors Calculus I	5	MAT 124M Calculus I
MATH 1478 Calculus II	5	MAT 125 Calculus II
PHYS 1411 Classical Physics I	5	PHY 292 and 292D General Physics I w/lab
PHYS 1412 Classical Physics II	5	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+