

## Chemistry A.S. Transfer Pathway

## Saint Paul College

This guide is intended for students completing the Chemistry A.S. Transfer Pathway. Students who do not intend to complete the 60-credit program should contact Kaia Sherburne at [ksherburne01@hamline.edu](mailto:ksherburne01@hamline.edu) for course selection advice. All courses must be completed with a C- or better to transfer. For graduate school, courses should be graded a B or better.

The table below lists the Saint Paul courses that have approved equivalencies at Hamline or fulfill requirements for the Chemistry B.S. major and general graduation requirements.

St. Paul College Course	Hamline Plan	Credits	Hamline University Course
CHEM 1711 Principles of Chemistry 1 w/lab	N1	4	CHEM 1130 General Chemistry I w/lab
CHEM 1712 principles of Chemistry 2 w/lab	N1	4	CHEM 1140 General Chemistry II w/lab
CHEM 2720 Organic Chemistry 1 w/lab	N1	5	CHEM 3450 Organic Chemistry I
CHEM 2721 Organic Chemistry 2 w/lab	N1	5	CHEM 3460 Organic Chemistry II
PHYS 2700 General Physics 1 (with Calculus)	N1	5	PHYS 1230 General Physics I w/lab
PHYS 2710 General Physics 2 (with Calculus)	N1	5	PHYS 1240 General Physics II w/lab
<b>Goal 1</b>			
ENGL 1711 Composition I		4	FYW 1110 Critical Reading and Composition
ENGL 1712 Composition II*	E	2	FYW 1120 First Year Writing
<b>Choose one:</b>			
COMM 1710 Fundamentals of Public Speaking	O, G	3	COMM 1710 Public Speaking
COMM 1720 Interpersonal Communication	O, D	3	COMM 3360 Interpersonal Communication
COMM 1730 Intercultural Communication	O, G	3	COMM 3460 Intercultural Communication
COMM 1750 Small Group Communication	O	3	COMM 3380 Small Group Communication
COMM 1770 Family Communication	D, O	3	
COMM 1780 Gender Communication	D, O	3	COMM 3670 Gender, Comm, and Knowledge
<b>Goal 2 – fulfilled by completing this degree</b>			
<b>Goal 3 – completed by pathway requirements</b>			
<b>Goal 4</b>			
MATH 2749 Calculus 1	R, M	4	MATH 1170 Calculus I
MATH 2750 Calculus 2	R, M	4	MATH 1180 Calculus II
<b>Goal 5 – minimum of 3 credits</b>			
<b>Examples:</b>			
SOCI 1710 Introduction to Sociology	S, D	4	SJSC 1110 Society and Social Change
POLS 1720 Intro to American Government	S	3	PSCI 1110 American Government & Politics
PSYC 1710 General Psychology	S	4	PSY 1330 General Psychology
<b>Goal 6 – minimum of 3 credits</b>			
<b>Examples:</b>			
ARTS 1720 Art Appreciation	F, G	3	
PHIL 1720 Ethics	H	3	
MUSC 1770 Music in World Cultures	F, G	3	
ENGL 1795 Literature and Film	H	3	

<b>Goals 1-10</b> – minimum of 9 credits such that at least six goal areas of MnTC are met <b>Examples:</b> COMM 1720 Interpersonal Comm (Goal 1, 7) ARTS 1720 Art Appreciation (Goal 6, 8) POLS 1720 Intro to American Gov't (Goal 5, 9) PHIL 1724 Environmental Ethics (Goal 6, 10)	O, D F, G S H	3 3 3 3	COMM 3360 Interpersonal Communication  PSCI 1110 American Government & Politics
Total credits for A.S. degree		60	
*Recommended for Hamline University			

Remaining major courses for Chemistry B.S. degree (American Chemical Society approved)	Credits
CHEM 3240 Analytical Chemistry w/lab (Hamline Plan C, W)	4
CHEM 3330 Instrumental Methods	4
CHEM 3940 Advanced Laboratory Techniques (Hamline Plan W)	2
CHEM 3550 Thermochemistry	4
CHEM 3560 Quantum Chemistry	4
CHEM 3950 Physical Chemistry Laboratory Techniques (Hamline Plan W)	2
CHEM 3840 Inorganic Chemistry w/lab (Hamline Plan O)	4
MATH 3320 Multivariable and Vector Calculus or equivalent 3XXX level course	4
<b>Advanced Courses and Research Experience</b> - 12 credits required, at least 4 credits from each area <b>Advanced Course</b> (with approval may substitute one course with advanced BIOL, MATH or PHYS course): BIOC 3820 Biochemistry I (Hamline Plan C, D) BIOC 3830 Biochemistry II (Hamline Plan O) CHEM 5900 Advanced Topics in Chemistry CHEM 5980 Special Topics	4 4 2 -
<b>Research Experience:</b> CHEM 3965 Intermediate Research CHEM 4010 Collaborative Research CHEM 4015 SCUR Summer Collaborative Research CHEM 5965 Advanced Research	2 4 - 2
<b>Seminar Experience</b> CHEM 5950 Chemistry Seminar A (three semesters) CHEM 5960 Capstone Seminar (Hamline Plan P, Q, W)	0.5 (1.5 total) 2
Total for major	43.5
<b>Remaining graduation requirements for B.S. degree</b>	<b>Credits</b>
General Education Requirements	
- Hamline Plan W - Writing Intensive (one course if not met by remaining major courses)	0-4
- Hamline Plan S - Social Science (one course if not met by MnTC)	0-4
- Hamline Plan F - Fine Arts (eight credits total; can be partially or fully met by MnTC)	0-8
- Hamline Plan H - Humanities (two courses if not met by MnTC)	0-8
- Hamline Plan D - Diversity (two courses if not met by MnTC and/or major courses)	0-8
- Hamline Plan G - Global Citizenship (one course if not met by MnTC)	0-4
Elective credits to reach minimum 128	Varies
Total credits completed at Hamline University	68
Total credits for B.S. degree	128

## Advising Notes

All sequence courses should be completed at the same institution. Ex. Organic Chemistry I & II, Introduction to Physics I & II.

Choice of elective courses should be based on your intended career and graduate school goals. Please contact the Hamline Transfer Admission Counselor (<https://www.hamline.edu/admission-aid/admission/transfer>) for assistance before signing up for elective coursework.

Please consult with the Hamline Transfer Admission Counselor when choosing courses for goal areas 5-10 to maximize meeting Hamline's graduation requirements.

Students transferring in at junior status should have the following courses completed in the major prior to transfer: CHEM 1711 and 1712, PHYS 2700 and 2710, and MATH 2749 and 2750.

Completing the full AS degree prior to transfer is highly recommended.

A STEM Education program launched in Fall 2022. Contact Hamline undergraduate Admissions for more details.

## Hamline Plan

E - Expository Writing

O - Speaking Intensive

R - Formal Reasoning

M - Quantitative Reasoning

F - Fine Arts

H - Humanities

N - Natural Science (N1 lab, N2 non-lab)

S - Social Science

G - Global Citizenship

D - Diversity

C - Collaboration

W - Writing Intensive

Q - Independent Critical Inquiry and Information Literacy

P - LEAP: Liberal Education As Practice