

Chemistry A.S. Transfer Pathway
Normandale Community 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 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 Normandale courses that have approved equivalencies at Hamline or fulfill requirements for the Chemistry B.S. major and general graduation requirements.

Normandale Community College Course	Hamline Plan	Credits	Hamline University Course
CHEM 1061 Principles of Chemistry I	N1	5	CHEM 1130 General Chemistry I w/lab
CHEM 1062 Principles of Chemistry II	N1	5	CHEM 1140 General Chemistry II w/lab
CHEM 2061 Organic Chemistry I	N1	5	CHEM 3450 Organic Chemistry I
CHEM 2062 Organic Chemistry II	N1	5	CHEM 3460 Organic Chemistry II
MATH 1510 Calculus I	R, M	5	MATH 1170 Calculus I
MATH 1520 Calculus II	R, M	5	MATH 1180 Calculus II
PHYS 1121 Physics 1 for Scientists & Engineers	N1	5	PHYS 1230 General Physics I w/lab
PHYS 1122 Physics 2 for Scientists & Engineers	N1	5	PHYS 1240 General Physics II w/lab
Goal 1 ENGC 1101 College Writing*	E	4	FYW 1120 First Year Writing
Choose one: COMM 1101 Fundamentals of Public Speaking COMM 1111 Interpersonal Communication	O O	3 3	COMM 1110 Public Speaking COMM 3360 Interpersonal Communication
Goal 2 – fulfilled by completing this degree			
Goal 3 – completed by pathway requirements			
Goal 4 – completed by pathway requirements			
Goal 5 – minimum of 3 credits Examples: HIST 1112 United States History II POLS 1130 Intro to US Politics PSYC 1110 Introduction to Psychology	S, D S S	4 3 4	PSY 1330 General Psychology
Goal 6 – minimum of 3 credits Examples: ART 1101 The Visual Arts PHIL 1103 Ethics MUSC 1124 Rock and Roll History ENGL 1189 Introduction to the Novel	F, G H F, D H	3 3 3 3	PHIL 1140 Ethics

Goals 7-10 – minimum of 7 credits from two courses Examples: HIST 1112 United States History II (Goals 5, 7) ART 1101 The Visual Arts (Goals 6, 8) PHIL 1103 Ethics (Goals 6, 9) SOC 2130 Intro to Criminal Justice (Goal 9) PHIL 1140 Environmental Ethics (Goal 9, 10)	S, D F, G H	4 3 3 3 3	PHIL 1140 Ethics CJFS 1120 Crime and Justice in America
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
Advanced Courses and Research Experience - 12 credits required, at least 4 credits from each area Advanced Course (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 -
Research Experience: CHEM 3965 Intermediate Research CHEM 4010 Collaborative Research CHEM 4015 SCUR Summer Collaborative Research CHEM 5965 Advanced Research	2 4 - 2
Seminar Experience 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
Remaining graduation requirements for B.S. degree	Credits
General Education Requirements - Hamline Plan W - Writing Intensive (one course if not met by remaining major courses) - Hamline Plan S - Social Science (one course if not met by MnTC) - Hamline Plan F - Fine Arts (eight credits total; can be partially or fully met by MnTC) - Hamline Plan H - Humanities (two courses if not met by MnTC) - Hamline Plan D - Diversity (two courses if not met by MnTC and/or major courses) - Hamline Plan G - Global Citizenship (one course if not met by MnTC)	0-4 0-4 0-8 0-8 0-8 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 1061 and 1062, PHYS 1121 and 1122, and MATH 1510 and 1520.

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