

## Chemistry A.S. Transfer Pathway

## Anoka Ramsey 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](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 Anoka Ramsey courses that have approved equivalencies at Hamline or fulfill requirements for the Chemistry B.S. major and general graduation requirements.

| Anoka Ramsey Community College Course   | Hamline Plan | Credits   | Hamline University Course                 |
|---|--------------|-----------|---|
| CHEM 1061 Principles of Chemistry I   | N1           | 4         | CHEM 1130 General Chemistry I             |
| CHEM 1062 Principles of Chemistry II  | N1           | 4         | CHEM 1140 General Chemistry II            |
| 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 1400 Calculus I  | R, M         | 5         | MATH 1170 Calculus I                      |
| MATH 1401 Calculus II   | R, M         | 5         | MATH 1180 Calculus II                     |
| PHYS 1327 College Physics I   | N1           | 6         | PHYS 1230 General Physics I               |
| PHYS 1328 College Physics II  | N1           | 6         | PHYS 1240 General Physics II              |
| <b>Goal 1</b>   |              |           |   |
| <b>Choose one:</b>  |              |           |   |
| ENGL 1120 Cross-Current College Writing & Critical Reading                    | E            | 4         | FYW 1120 First Year Writing               |
| ENGL 1121 College Writing & Critical Reading                                  | E            | 4         | FYW 1120 First Year Writing               |
| <b>Choose one:</b>  |              |           |   |
| CMST 1110 Intro to Communication  | O            | 3         | COMM 1100 Intro to Communication Studies  |
| CMST 2215 Public Speaking   | O            | 3         | COMM 1110 Public Speaking                 |
| CMST 2220 Interpersonal Communication   | D, O         | 3         | COMM 3360 Interpersonal Communication     |
| <b>Goal 2 – fulfilled by completing this degree</b>                           |              |           |   |
| <b>Goal 3 – completed by pathway requirements</b>                             |              |           |   |
| <b>Goal 4 – completed by pathway requirements</b>                             |              |           |   |
| <b>Goals 5-10 – minimum of 13 credits chosen from at least two goal areas</b> |              |           |   |
| <b>Examples:</b>  |              |           |   |
| PSYC 1110 General Psychology (Goal 5, 7)                                      | S, D         | 4         | PSY 1330 General Psychology               |
| ART 1100 Introduction to Art (Goal 6, 8)                                      | F, G         | 3         |   |
| ENGL 2210 Global Literature (Goal 6, 8)                                       | H, G         | 3         | ENGL 1200 Introduction to English Studies |
| POLS 1111 American Gov't & Politics (Goal 5, 9)                               | S            | 3         | PSCI 1110 American Government & Politics  |
| PHIL 1120 Environmental Ethics (Goal 9, 10)                                   |              | 3         |   |
| <b>Total credits for A.S. degree</b>  |              | <b>60</b> |   |

| <b>Remaining major courses for Chemistry B.S. degree (American Chemical Society approved)</b>   | <b>Credits</b>  |
|---|-----------------|
| 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<br><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)  | 4               |
| BIOC 3830 Biochemistry II (Hamline Plan O)  | 4               |
| CHEM 5900 Advanced Topics in Chemistry  | 2               |
| CHEM 5980 Special Topics  | -               |
| <b>Research Experience:</b>   |                 |
| CHEM 3965 Intermediate Research   | 2               |
| CHEM 4010 Collaborative Research  | 4               |
| CHEM 4015 SCUR Summer Collaborative Research  | -               |
| CHEM 5965 Advanced Research   | 2               |
| <b>Seminar Experience</b>   |                 |
| CHEM 5950 Chemistry Seminar A (three semesters)   | 0.5 (1.5 total) |
| CHEM 5960 Capstone Seminar (Hamline Plan P, Q, W)   | 2               |
| <b>Total for major</b>  | <b>43.5</b>     |
| <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 (two courses if not met by MnTC)  | 0-8             |
| - 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          |
| <b>Total credits completed at Hamline University</b>  | <b>68</b>       |
| <b>Total credits for B.S. degree</b>  | <b>128</b>      |

### 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 1327 and 1328, and MATH 1400 and 1401.

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

A STEM Education program launched in Fall 2022. Contact Hamline Undergraduate Admission 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