

Program Description

The Chemistry Transfer Pathway Associate of Science (AS) degree program offers students a powerful option: the opportunity to complete an Associate of Science degree with course credits that directly transfer to designated Chemistry bachelor's degree programs at Minnesota State universities. The curriculum has been specifically designed so that students completing this pathway degree and transferring to one of the seven Minnesota State universities enter the university with junior-year status. All courses in the Transfer Pathway associate degree will directly transfer and apply to the designated bachelor's degree programs in a related field.

Minnesota State Universities - Designated Degrees

- Bemidji State University: Chemistry BA, Chemistry BS
- Metropolitan State University: Chemistry BS
- Minnesota State University, Mankato: Chemistry BS (ACS Approved)
- Minnesota State University, Moorhead: Chemistry BA, Chemistry BS
- Southwest Minnesota State University: Chemistry BA
- St. Cloud State University: Chemistry BS (ACS Approved)
- Winona State University: Chemistry BS (General), Chemistry BS (ACS Environmental Chemistry, ACS Material Chemistry)

Program Goals

By completing this program, students will achieve the following learning goals:

1. Demonstrate basic knowledge and understanding of the fundamentals of experimental and theoretical chemistry;
2. Explain and apply skills in analytical thinking and problem solving, and apply scientific methods to experimental data;
3. Demonstrate skills in laboratory operations including making accurate and precise measurements, preparing solutions, operating instrumentation, experimental design, and the interpretation and reporting of quantitative and qualitative data and results;
4. Communicate their own data and analysis in oral and written communications that uses tables and graphs, describe detailed experimental procedures, and clearly explain conclusions, in order to create clear and compelling papers, posters, or presentations;
5. Work both independently and collaboratively in the classroom and in the laboratory; and
6. Apply learned concepts to everyday situations and experiences, and critically evaluate contributions to science reported in the media; identify valid approaches to scientific problem solving and reporting.

Required Courses: 60 Total Credits

| | | |
|--------------------------------------|----------------------------------|---|
| <input type="checkbox"/> CHEM 1061 ♦ | Principles of Chemistry I | 4 |
| <input type="checkbox"/> CHEM 1062 ♦ | Principles of Chemistry II | 4 |
| <input type="checkbox"/> CHEM 2061 ♦ | Organic Chemistry I | 5 |
| <input type="checkbox"/> CHEM 2062 ♦ | Organic Chemistry II | 5 |
| <input type="checkbox"/> MATH 1400 ♦ | Calculus I | 5 |
| <input type="checkbox"/> MATH 1401 ♦ | Calculus II | 5 |
| <input type="checkbox"/> PHYS 1327 ♦ | College Physics I | 6 |
| <input type="checkbox"/> PHYS 1328 ♦ | College Physics II | 6 |

Complete at least 20 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas. One course may satisfy more than one goal area, but the course credits may be counted only once.

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|--|---|
| <input type="checkbox"/> 1. Communication | |
| <input type="checkbox"/> ENGL 1120 ♦ OR ENGL 1121 ♦ | 4 |
| <input type="checkbox"/> CMST 1110 OR CMST 2215 OR CMST 2220 | 3 |
| <input type="checkbox"/> 2. Critical Thinking | |
| <input type="checkbox"/> 3. Natural Science | |
| <input type="checkbox"/> CHEM 1061 ♦ | 4 |
| <input type="checkbox"/> CHEM 1062 ♦ | 4 |
| <input type="checkbox"/> PHYS 1327 ♦ | 6 |
| <input type="checkbox"/> PHYS 1328 ♦ | 6 |
| <input type="checkbox"/> 4. Mathematical/Logical Reasoning | |
| <input type="checkbox"/> MATH 1400 ♦ | 5 |
| <input type="checkbox"/> MATH 1401 ♦ | 5 |

Choose courses from at least two of the following areas, totaling 13 credits:

- ☐ 5. History/Social/Behavioral Sciences
- ☐ 6. Humanities/Fine Arts
- ☐ 7. Human Diversity
- ☐ 8. Global Perspective
- ☐ 9. Ethical/Civic Responsibility
- ☐ 10. People and the Environment

♦ Course has prerequisite - see course schedule or catalog description.

^ Course requires Instructor permission.

NOTE: You are encouraged to contact an academic advisor at 763-433-1230 for course planning assistance and information about transfer credit evaluation and transfer options.

Chemistry Transfer Pathway

Associate of Science (AS) Degree

Pathway Plan

The following two-year Pathway Plan is suggested for full-time students. Part-time students will need more time to complete this pathway. For assistance with pathway planning, students should schedule an appointment with an academic advisor. See also the college catalog Appendix for course offering information.

Semester One (16 Credits)

- ☐ CHEM 1061♦ Principles of Chemistry I 4
- ☐ ENGL 1120♦ Cross-Current College Writing and Critical Reading
OR
- ☐ ENGL 1121♦ College Writing and Critical Reading 4
- ☐ MATH 1400♦ Calculus I 5
- ☐ General Ed/MnTC 3

Semester Two (15 Credits)

- ☐ CHEM 1062♦ Principles of Chemistry II..... 4
- ☐ CMST 1110 Introduction to Communication
OR
- ☐ CMST 2215 Public Speaking
OR
- ☐ CMST 2220 Interpersonal Communication..... 3
- ☐ MATH 1401♦ Calculus II..... 5
- ☐ General Ed/MnTC 3

Semester Three (14 Credits)

- ☐ CHEM 2061♦ Organic Chemistry I..... 5
- ☐ PHYS 1327♦ College Physics I..... 6
- ☐ General Ed/MnTC 3

Semester Four (15 Credits)

- ☐ CHEM 2062♦ Organic Chemistry II 5
- ☐ PHYS 1328♦ College Physics II 6
- ☐ General Ed/MnTC 4

Degree Specifics

- A minimum of 60 semester credits in courses numbered 1000 or above.
- A minimum cumulative grade point average (GPA) of 2.0 in courses numbered 1000 or above at ARCC.
- Some students may need preparatory courses in the areas of English, mathematics or reading. Courses numbered below 1000 will not apply toward this degree.
- Satisfy residency requirements.
- A minimum grade of C must be earned in all program requirements.
- Completion of specific degree requirements.
- Each state university has specific program requirements for completion. Please speak with your advisor about requirements at receiving institutions.

♦ *Course has prerequisite - see course schedule or catalog description.*^ *Course requires Instructor permission.*

NOTE: You are encouraged to contact an academic advisor at 763-433-1230 for course planning assistance and information about transfer credit evaluation and transfer options.

- To receive your diploma, you must apply to graduate.
- The requirements of this program are subject to change without notice.