# Discipline: Chemistry

This Montana transfer pathway outlines the knowledge and skills that are essential for students to complete during their first two years of study for a major in Chemistry. The coursework described below will meet degree requirements at all Montana University System campuses offering majors in Chemistry. If you complete this coursework, **including a full general education curriculum**, successfully, you will be well-positioned to finish your degree with an additional two years of full-time study at your transfer college.

### Lower-Division Major Requirements

The courses below are specifically related to a field of study and are a part of the requirements for graduation:

- CHMY 141/142 College Chemistry I and lab
- CHMY 143/144 College Chemistry II and lab
- CHMY 221/222 (321/322) Organic Chemistry I and lab
- CHMY 223/224 (323/324) Organic Chemistry II and lab
- PHSX 220/221 Physics I (with calculus) and lab
- PHSX 222/223 Physics II (with calculus) and lab
- M 171 Calculus I
- M 172 Calculus II
- M 273 Multivariable Calculus

### Campus Specific Requirements

Students intending to pursue Biochemistry options at Montana State University, Montana Tech, or the University of Montana:

- Take STAT 216 rather than M 273; and
- Take either BIOB 260 (preferred) or BIOB 160 prior to transfer as they are prerequisites for Junior year Biochemistry courses
- IF TRANSFERRING TO MSU-BOZEMAN: Can take either M 161 or M 171; M 172 is not required
- IF TRANSFERRING TO MSU-BOZEMAN or MONTANA TECH: Can take PHSX 205 and PHSX 207 instead of PHSX 220 and PHSX 222

Students intending to pursue the Environmental Chemistry Option at Montana Tech:

May take PHSX 205 and PHSX 207 instead of PHSX 220 and PHSX 222



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## Campus Specific Requirements (Cont'd)

Students intending to pursue the University of Montana options in Pharmacology or Forensic Science:

- Need not take M 273
- Should take BIOB 160 and BIOB 260 prior to transfer

Students intending to transfer to Montana State University Billings:

• Should take STAT 216 rather than M 273

### General Education Requirements

To be well positioned to graduate on time after transfer, it is <u>vital</u> you finish your general education core before you transfer.

Students attending Montana University System campuses have three options for transferring general education core requirements: (1) complete all lower-division general education requirements for one specific campus, (2) complete the Montana University System Core transferrable general education curriculum, or (3) obtain an A.A. or A.S. transferrable degree.

#### OPTION 1: Complete a campus's lower-division general education requirements

Students complete all lower-division coursework (100- or 200-level courses) in a campus-specific general education program; when transferring, this block of courses substitutes for comparable general education program requirements at any other MUS campus. The student may still be required to take additional general education coursework at the upper-division level at the new campus, but not at the lower-division level. Each MUS campus has designated specific requirements for its general education program.

#### OPTION 2: Complete the MUS Core general education curriculum

Students can complete a set of courses known as the <u>MUS Core transferrable gen ed curriculum</u> (MUS Core), consisting of 30 lower-division credits distributed across six categories. Each campus in the MUS has identified a set of classes that will satisfy the MUS Core requirements. As with Option 1, students may still be required to take additional general education coursework at the upper-division level.

#### This option comes with an important bonus.

Students who have not completed the entire 30-credit MUS Core general education curriculum may still use it to transfer if they have completed at least 20 of the required credits. If the student has earned at least 20 MUS Core credits, they can work with their advisor to determine whether they will complete the remaining MUS Core requirements at the new campus or if they will roll their 20 MUS Core credits into the new campus' general education program. If the student has earned less than 20 MUS Core credits, they must complete the new campus' general education program, but the MUS Core courses will be reviewed for possible transfer credit towards the new campus' general education program.



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### General Education Requirements (Cont'd)

#### OPTION 3: Obtain an AA or AS degree

An Associate of Arts (A.A.) or an Associate of Science (A.S.) degree indicates that students have completed the general education program of their specific two-year campus—thus satisfying Option 1. These credentials are often referred to as "<u>transfer degrees</u>" for this reason. Some specialized associate's degrees, such as the Associate of Science in Nursing, may not include the necessary number of general education credits to meet the expectations stated in Option 3.

## Participating Institutions

This pathway will meet degree requirements in Chemistry bachelor's programs at the following Montana University System institutions:

- Montana State University Bozeman
- Montana State University Billings
- Montana Technological University
- The University of Montana Missoula

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