MINNESOTA STATE UNIVERSITY MOORHEAD

Chemistry BA Roadmap

Program	**Bachelor of Arts: Chemistry**
Total Credits	120
Catalog	2022-2023

*The plan below is **one** of several possible ways for you to complete this degree.*
Your individualized plan may look different if you have already fulfilled some requirements.
Your Financial Aid Award may require additional term credits for full-time funding.
You must complete all university and program requirements successfully to complete this degree (GPA, 120 credits, LASC, WI, residency)

Curriculum			Course	Course Title	Credits	Take When	Total Credits
							120.00
1st Year		*Notes*					
Core Requirement:	LASC 3		CHEM 150	General Chemistry I Lecture	3.00	1st Fall	15.00
Core Requirement:	LASC 3	1	CHEM 150L	General Chemistry I Lab	1.00	1st Fall	
Graduation Requirement:	First-Year Experience Course		FYE 101	First Year Experience	1.00	1st Fall	
	LASC 2	1			3.00	1st Fall	
	LASC Elective	8			3.00	1st Fall	
Related Requirement:	LASC 4	2	MATH 261	Calculus I	4.00	1st Fall	
Core Requirement:	LASC 3		CHEM 210	General Chemistry II Lecture	3.00	1st Spring	15.00
Core Requirement:	LASC 3	1	CHEM 210L	General Chemistry II Lab	1.00	1st Spring	
Core Requirement:			CHEM 297	Introduction to Research	1.00	1st Spring	
Related Requirement:	LASC 4	3	MATH 262	Calculus II	4.00	1st Spring	
	LASC 1B		ENGL 101	English Composition	3.00	1st Spring	
	LASC/WI Elective	8			3.00	1st Spring	
2nd Year							
Core Requirement:			CHEM 350	Organic Chemistry I Lecture	3.00	2nd Fall	14.00
Core Requirement:			CHEM 355	Organic Chemistry I Lab	1.00	2nd Fall	
Related Requirement:	LASC 3	5	PHYS 200	Physics I with Calculus and Lab	4.00	2nd Fall	
	LASC Elective	8			3.00	2nd Fall	
	LASC/WI Elective	8			3.00	2nd Fall	
Core Requirement:		10	CHEM 360	Organic Chemistry II Lecture	3.00	2nd Spring	15.00
Core Requirement:			CHEM 365	Organic Chemistry II Lab	1.00	2nd Spring	
Core Requirement:		9	CHEM 380/380	Analytical Chemistry	4.00	2nd Spring	
Related Requirement:	LASC 3	5	PHYS 201	Physics II with Calculus and Lab	4.00	2nd Spring	
	LASC 1A		COMM 100	Speech Communication	3.00	2nd Spring	
3rd Year							
Core Requirement:		10	CHEM 300	Inorganic Chemistry I	3.00	3rd Fall	15.00
Core Requirement:			CHEM 400	Biochemistry I	3.00	3rd Fall	
Core Requirement:			CHEM 405	Biochemistry I Lab	1.00	3rd Fall	
Upper level electives:		6			4.00	3rd Fall	
	LASC Elective				4.00	3rd Fall	
Core Requirement:		7	CHEM 450	Physical Chemistry: Thermodynamics	3.00	3rd Spring	15.00
Upper level electives:		6			4.00	3rd Spring	
	LASC Elective				4.00	3rd Spring	
Writing Intensive:	200-level or higher				4.00	3rd Spring	
4th Year							
Core Requirement:	WI for major		CHEM 375	Team-Based Research	4.00	4th Fall	16.00
Upper level electives:		6			4.00	4th Fall	
Electives:		4			4.00	4th Fall	
Electives:		4			4.00	4th Fall	
Upper level electives:		6			4.00	4th Spring	15.00
Electives:		4			4.00	4th Spring	
Electives:		4			4.00	4th Spring	
Electives:		4			3.00	4th Spring	
							120.00

[1] Chem 275 can be taken in place of either general chemistry lab and counts as a LASC 2. Students in LC will either take Biol 100 or Chem 275.

[2] ACT math score is needed to inform whether a student should begin directly in calculus or a lower math class.

[3] Math 234 or Biol 275 can be taken instead of Calculus II.

[4] In considering electives, keep in mind that all of the Liberal Arts and Science Curriculum requirements must be fulfilled.

[5] If a student has not taken Calculus, Phys 160/161 can be taken instead of Phys 200/201.

[6] At least 16 credits in 300+ level science/math disciplines (AST/MATH/BCBT/BIOL/CHEM/PHYS/GEOS/CSIS) must be taken.

[7] An alternative to Physical Chemistry-Thermo, the spring physical chemistry course, is to take Physical Chemistry-Quantum Chem 460, which is offered in the fall of even-numbered years or BCBT 450 Molecular and Biophysical chemistry (each spring).

[8] Classes like HIST 374/379 (5/10/WI), HIST 105 (5/8), POL 160 (5/8), POL 120 (5/9), ENGL 407 (6/10), PHIL 215/311/312/318 (6/9/WI?), PHIL 102/120/235 (6/7), MUS 240 (6/7), PHIL 302 (6/8) double count. The right set of 4 of these takes out all required LASC 5, 6, 7, 8, 9, 10 + 2WI.

[9] An alternative to Chem 380 is Chem 480. Chem 480 does not have a separate lab and is taught in falls of odd years.

[10] Students must take 2 additional classes in chemistry from a list that also includes Chem 410, Chem 420, or BCBT 463.