Aims2UNC Curriculum Map*

Chemistry A.S. / B.S. Chemistry-Chemistry Concentration (ACS Certified)

2024-2025 Catalog

Degree Requirements – 120 Credits

*Curriculum Map for students transitioning from Aims Community College to the University of Northern Colorado for the purpose of completing a bachelor's degree. An AA/AS degree from Aims will result in a waiver of UNC's Liberal Arts Curriculum (general education) and the transfer of at least 60 credits depending on course grades from Aims. Courses with grades below a C- will not transfer to UNC, which could result in a transfer of fewer than 60 credits. Please note that course offerings are subject to availability and Curriculum Maps are subject to change. Please see Aims2UNC advisor for appropriate sequence of Aims courses and further information.

AIMS COMMUNITY COLLEGE – 65 Credits			
YEAR 1 – FALL: 18 credits		**YEAR 1 – SPRING: 18 credits**	
ENG 1021 English Composition I (GT-CO1) ** **(UNC Equivalent: ENG 122 College Composition)**	3 credits	ENG 1022 English Composition II (GT-CO2) ** **(UNC Equivalent: ENG 123 College Research Paper)**	3 credits
MAT 2410 Calculus I [2] (GT-MA1) **MATH 131 Calculus I**	5 credits	CHE 1112 Gen Coll Chem II w/ Lab (GT-SC1) **CHEM 112/112L Principles of Chemistry II**	5 credits
CHE 1111 Gen Coll Chem I w/ Lab (GT-SC1) **CHEM 111/111L Prin of Chemistry I (LAC Natural & Physical Sci.)**)	5 credits	MAT 2420 Calculus II (GT-MA1) **MATH 132 Calculus II**	5 credits
PHY 2111 Physics: Calculus-based I w/lab (GT-SC1) **PHYS 240 General Physics I**	5 credits	PHY 2112 Physics: Calculus-based II w/lab (GT-SC1) **PHYS 241 General Physics II**	5 credits
YEAR 2 – FALL: 15 credits		**YEAR 2 – SPRING: 14 credits**	
MAT 2430 Calculus III (GT-MA1) **MATH 233 Calculus III**	4 credits	CHE 2112 Organic Chemistry II w/Lab **CHEM 332/332L Organic Chemistry II**	5 credits
CHE 2111 Organic Chemistry w/Lab **CHEM 331/331L Organic Chemistry I**	5 credits	Social & Behavioral Sciences (GT-SS*)	3 credits
Arts & Humanities (GT-AH*)	3 credits	Social & Behavioral Sciences (GT-SS*)	3 credits
History (GT-HI1)	3 credits	Arts & Humanities (GT-AH*)	3 credits
UNIVERSITY OF NORTHERN COLORADO – 58 Credits			
YEAR 3 – FALL: 16 credits		**YEAR 3 – SPRING: 16 credits**	
CHEM 321 Chemical Analysis	4 credits	CHEM 421 Instrumental Analysis [4] or elective	4 credits
Chemistry or General Electives	5 credits	CHEM 451 Physical Chemistry I [4] or elective	4 credits
CHEM 481 General Biochemistry I	3 credits	CHEM 451L Physical Chemistry I Lab [4] or elective	1 credit
CHEM 481L Experimental Biochemistry I	1 credit	CHEM 482 – General Biochemistry II [4] or elective	3 credits
SCI 291 Scientific Writing	3 credits	CHEM 482L General Biochemistry II Lab [4] or elective	1 credit
		Chemistry or General Electives	3 credits
YEAR 4 – FALL: 14 credits		**YEAR 4 – SPRING: 13 credits**	
Chemistry or General Electives	5 credits	Chemistry or General Electives	8 credits
CHEM 499 Seminar & Research in Chemistry	1 credit	CHEM 499 Seminar & Research in Chemistry	1 credit
CHEM 441 Inorganic Chemistry I (F)	3 credits	CHEM 442 Inorganic Chemistry II (S)[4] or elective	3 credits
CHEM 452 Physical Chemistry II [4] or elective	4 credits	CHEM 443 Inorganic Chemistry Lab (S)[4] or elective	1 credit
CHEM 452L Physical Chemistry II Lab [4] or elective	1 credit	Chemistry Assessment Exam[6]	0 credits

**For a full listing of approved Guaranteed Transfer (GT) courses in these categories please refer to the current catalog.

Contact Information –
Department: Department of Chemistry & Biochemistry
Website: www.unco.edu/nhs/chemistry
Phone: 970-351-2559
Email: chemistry@unco.edu

Program Admission Requirements –

Academic Good Standing.

For information about admission to the University of Northern Colorado, please visit https://www.unco.edu/admissions/.

Notes –

1. A total of 15 credits are required in Arts & Humanities (2 courses, minimum 3 credits each), History (1 course, minimum 3 credits), Social & Behavioral Sciences (2 courses, minimum 6 credits). You must also have U.S. Multicultural Studies (1 course, minimum 3 credits), International Studies (1 course, minimum 3 credits). Six total credits must be double counted.

2. Students who lack sufficient preparation in mathematics may need to start in MATH 124 College Algebra(4), MATH 125 Plane Trigonometry (3), or MATH 127 Elementary Functions (4). Consult your advisor.

3. With advisor approval, students can substitute ENG 123 for SCI 291 (3) --Scientific Writing.

4. Take three of these five (lecture + lab) combinations (CHEM 421, CHEM 442/443, CHEM 451/451L, CHEM 452/452L, and CHEM 482/482L).

5. All students must take a chemistry major assessment exam prior to graduation.

Students receiving this degree, designed to give students a broad background and an in-depth foundation in chemistry, will be certified by the American Chemical Society. Students will work with a faculty member on anindependent research project in chemistry.

Students graduating with this emphasis will be prepared to pursue graduate study in chemistry, professional schools (e.g., chemical engineering, medicine, dentistry, veterinary medicine and other health related areas) or anentry-level position with a chemical or petroleum industry.

A. This transfer guide is a suggested track for completing this major. You must meet with your advisor each semester to determine an appropriate plan.

B. Upper-level courses are generally taught only one semester per year and are marked on the sheet as F (Fall)or S (Spring). In this plan, courses are listed in order of required prerequisites first.

C. Some upper-level courses are separate from laboratory, e.g., CHEM 331/CHEM 331L Organic Chemistry I and Organic Chemistry I Lab. In these cases, both lecture and laboratory are intended to be taken concurrently. Separate grades for lecture and lab will be issued.

D. All students in the program must take an assessment examination before graduation.

E. Graduate level CHEM courses are recommended for juniors and seniors. Other recommended electivesinclude MATH 221, MATH 335, STAT 150, PHYS 321, and PHYS 343.

F. Students majoring in chemistry must earn a grade of “C” or better (C- is not acceptable) in all courses having a CHEM prefix which count toward the major. In addition, a grade of "C" or better in courses with aCHEM prefix is required in order to satisfy the prerequisites for most CHEM courses.

G. It is recommended that students have a fundamental background in computers.