Community College of Aurora /UNC Transfer Guide*

BS Chemistry, Biochemistry Emphasis (ACS Certified)

2021-2022 Catalog

Degree Requirements – 120 credits

*Guide for students transferring to the University of Northern Colorado for the purpose of completing a bachelor'sdegree. Courses marked as (***bold**) are UNC equivalent courses (if applicable) upon transfer to UNC. UNC Liberal Arts Curriculum (LAC) is waived with completion of AA/AS degree which is **not** completed as part of this plan. (Note: The four-year plan below is a recommended schedule and not reflective ofevery student's individual academic context. We encourage each student to consult with their respective academic advisor for course sequence guidance.)

COMMUNITY COLLEGE OF AURORA – 34 Credits			
YEAR 1 – FALL: 18 credits		**YEAR 1 – SPRING: 16 credits**	
CHE 111 Gen Coll Chem I w/ Lab **CHEM 111/111L Prin of Chemistry I (LAC Natural & Physical Sci.)**	5 credits	CHE 112 Gen Coll Chem II w/ Lab **CHEM 112/112L Principles of Chemistry II**	5 credits
ENG 121 English Composition I **ENG 122 College Composition (LAC Written Comm.-Recommended)**	3 credits	MAT 202 Calculus II **MATH 132 Calculus II**	5 credits
BIO 111 Gen Coll Bio I w/ Lab **BIO 110 Biology: Atoms to Cells (LAC Natural & Physical Sci.)**	5 credits	Liberal Arts Curriculm[1]	3 credits
MAT 201 Calculus I [2] **MATH 131 Calculus I (LAC Mathematics)**	5 credits	Electives	3 credits
UNIVERSITY OF NORTHERN COLORADO – 86 Credits			
YEAR 2 – FALL: 14 credits		**YEAR 2 – SPRING: 16 credits**	
CHEM 331/331L Organic Chemistry I	4/1 credits	CHEM 332/332L Organic Chemistry II	4/1 credits
PHYS 240 General Physics I (LAC Natural & Physical Sci.)	5 credits	PHYS 241 General Physics II	5 credits
MATH 233 Calculus III	4 credits	SCI 291 Scientific Writing (LAC Written Comm.)[3]	3 credits
		BIO 210 Cell Biology	3 credits
YEAR 3 – FALL: 14 credits		**YEAR 3 – SPRING: 14 credits**	
CHEM 321 Chemical Analysis (F)	4 credits	CHEM 421 Instrumental Analysis (S)[4] or elective	4 credits
CHEM 481/481L General Biochemistry I (F)	3/1 credits	CHEM 482/482L General Biochemistry II (S)	3/1 credits
Liberal Arts Curriculum	3 credits	Liberal Arts Curriculum	6 credits
Biology Electives[4]	3 credits		
YEAR 4 – FALL: 16 credits		**YEAR 4 – SPRING: 12 credits**	
CHEM 452/452L Physical Chemistry II (F)[4] or elective	4/1 credits	CHEM 451/451L Physical Chemistry I (S)	4/1 credits
CHEM 499 Seminar & Research in Chemistry	1 credit	CHEM 499 Seminar & Research in Chemistry	1 credit
Biology Electives[5]	4 credits	CHEM 442 Inorganic Chemistry II (S)[4] or elective	3 credits
CHEM 441 Inorganic Chemistry I (F)	3 credits	CHEM 443 Inorganic Chemistry Lab (S)[4] or elective	1 credit
Liberal Arts Curriculum	3 credits	Electives	2 credits
		Chemistry Assessment Exam[6]	0 credits

This four-year plan is a recommended schedule to complete your bachelor's degree in 4 years. Every UNC student must meet the following requirements in order to graduate with a bachelor's degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; meet all degree requirements in the student's major field of study. Each major and/or emphasis may have additional requirements necessary for graduation. **Students must consult with their major advisor to receive information on any additional graduation requirements.**

Program Admission Requirements –

No separate admission requirement

Minor Required –

No minor required

Contact Information –

Department of Chemistry & Biochemistry
Ross Hall Room 3480, 970-351-2559
http://www.unco.edu/nhs/chemistry-biochemistry/

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 (1 course, minimum 3 credits), one additional course (minimum 3 credits) in Arts & Humanities or History or Social & Behavioral Sciences. 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 two of these four (lecture + lab) combinations (CHEM 421, CHEM 442/443, CHEM 451/451L, and CHEM 452/452L) as in-depth courses.
5. Recommended Electives:

   Take two of the following courses:

   a. BIO 220 Genetics (3)
   b. BIO 351 Microbiology (4)
   c. BIO 450 Cell Physiology (4)

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

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Notes –

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

Students graduating with this emphasis will be prepared to pursue graduate study in chemistry, biochemistry, molecular biology, environmental health, professional schools (e.g., medicine, dentistry, veterinary medicine and other health related areas) or obtain an entry-level position within the chemical or biotechnological industry.

A. The four-year plan described on the other side of this sheet 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 481/CHEM 481L General Biochemistry Iand Experimental Biochemistry I and CHEM 482/CHEM 482L General Biochemistry II and Experimental Biochemistry II. In these cases, CHEM 481/481L are taught in the Fall and CHEM 482/482L are taught in the Spring.

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 electives include 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.

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